



6450-01-P

DEPARTMENT OF ENERGY

10 CFR Part 810

RIN 1994-AA02

Assistance to Foreign Atomic Energy Activities

AGENCY: National Nuclear Security Administration (NNSA), Department of Energy (DOE).

ACTION: Final rule.

SUMMARY: DOE is issuing the first comprehensive updating of regulations concerning Assistance to Foreign Atomic Energy Activities since 1986, reflecting a need to make the regulations consistent with current global civil nuclear trade practices and nonproliferation norms, and to update the activities and technologies subject to the Secretary of Energy's specific authorization and DOE reporting requirements. This rule also identifies destinations with respect to which most assistance would be generally authorized and destinations that would require a specific authorization by the Secretary of Energy.

DATES: This rule is effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

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PART 810--ASSISTANCE TO FOREIGN ATOMIC ENERGY ACTIVITIES

I. Background

The Department of Energy's part 810 regulation (10 CFR Part 810) implements section 57 b.(2) of the Atomic Energy Act of 1954 (AEA), as amended by section 302 of the Nuclear Nonproliferation Act of 1978 (NNPA). Part 810 controls the export of unclassified nuclear technology and assistance. It enables peaceful nuclear trade by helping to assure that nuclear technologies exported from the United States will not be used for non-peaceful purposes. Part 810 controls the export of nuclear technology and assistance by identifying activities that can be "generally authorized" by the Secretary, thereby requiring no further authorization under part 810. It also controls those activities that require "specific authorization" by the Secretary. Part 810 also delineates the process for applying for specific authorization from the Secretary and identifies the reporting requirements for activities subject to part 810.

While some revisions to part 810 were made in 1993 and 2000, part 810 has not been comprehensively updated since 1986. Since then, the global civil nuclear market has expanded, particularly in China, the Middle East, and Eastern Europe, with vendors from France, Japan, the Republic of Korea, Russia, and Canada emerging to serve customers in these markets. DOE believes the regulation should be updated to ensure that the part 810 nuclear export controls remain effective and efficient as the commercial nuclear market continues to expand. This means carefully determining which destinations and activities can be generally authorized and which will require a specific authorization, and assuring that the determinations are consistent with U.S. national security, diplomatic, and trade policy.

On September 7, 2011, DOE issued the NOPR to propose the updating of part 810 (76 FR 55278). The NOPR listed destinations for which most assistance to foreign atomic energy activities would be generally authorized, and activities that would require a specific authorization by the

Secretary of Energy. Additionally, the NOPR identified types of technology transfers subject to the regulation. DOE received numerous comments on the NOPR. After careful consideration of all comments received on the NOPR, on August 2, 2013 DOE issued a supplemental notice of proposed rulemaking (SNOPR) and public meetings to respond to those comments, propose new or revised rule changes, and afford interested parties a second opportunity to comment (78 FR 46829). DOE held its first public meeting on August 5, 2013. On October 29, 2013 DOE issued a notice of a second public meeting and extension of the comment period and on March 25, 2014 re-opened the comment period until April 2, 2014. Today, DOE is issuing this final rule.

As described below and in response to comments received from the public on the SNOPR, in the final rule announced today, DOE makes only a few changes to the existing rule, what will be referred to hereinafter as “the 1986 version of the rule,” that are different than those proposed in the SNOPR. Details of today’s changes to the 1986 version of part 810 are summarized in Section II. Responses to public comments received on the SNOPR are discussed in Section IV.

II. Description of Changes in the Final Rule

In response to the SNOPR, DOE received written comments from 26 entities as well as oral comments made at public meetings. All of the comments and meeting transcripts are available for review on line at: <http://www.regulations.gov/#!docketDetail;D=DOE-HQ-2011-0035>, Docket ID: DOE-HQ-2011-0035. This final rule responds to the comments received in response to the SNOPR and makes changes to the 1986 version of the rule. Final changes to the current rule, organized by section, are summarized below:

1. The change to § 810.1 “Purpose” states the statutory basis and purpose of the part 810 regulation, eliminating the need for the 1986 version of § 810.6. “U.S. persons” has been replaced with “persons.”

2. The change to paragraph (a) in § 810.2 “Scope” states DOE’s jurisdiction under § 57 b.(2) of the Atomic Energy Act. Paragraph (b) in § 810.2 identifies activities governed by the regulation when those activities, whether conducted in the United States or abroad, constitute engaging or participating, directly or indirectly, in the development or production of special nuclear material outside the United States. Paragraph (c) of § 810.2 identifies exempt activities, some retained from the 1986 version of the rule. A person directly or indirectly engaging or participating in the development or production of special nuclear material outside the United States may be, for example, a U.S. citizen, a foreign national or a subsidiary of a U.S. company located abroad. The activity may take place in the United States, in a country listed in the Appendix or in a country not listed in the Appendix. Part 810 does not apply to transfers of nuclear technology or assistance within the United States between or among U.S. citizens, citizens or nationals of foreign countries who are U.S. lawful permanent residents, or protected individuals under the Immigration and Naturalization Act (8 U.S.C. 1324b(a)(3)), because such transfers would not constitute engaging or participating, directly or indirectly, in the development or production of special nuclear material outside the United States.

3. The following exempt activities are added:

- Exports authorized by the Department of State (DOS) or Department of Commerce (DOC), or the Nuclear Regulatory Commission (NRC);
- Transfer of “publicly available information,” “publicly available technology,” and the results of “fundamental research”;
- Assistance for certain mining and milling activities, and certain fusion reactors because these activities do not involve the production or use of special nuclear material;
- Production or extraction of radiopharmaceutical isotopes when the process does not involve special nuclear material; and

- Transfers to lawful permanent residents of the United States or protected individuals under the Immigration and Naturalization Act (8 U.S.C. 1324b(a)(3)).

4. In § 810.3 “Definitions” of this final rule, a number of definitions are added and revisions are made to existing definitions to reflect terminological changes and technological developments since the part 810 regulation was last updated, and to provide additional clarity to certain terms defined and used in the 1986 version of the rule.

The 1986 version of the rule has 23 defined terms. This final rule substantially revises 5 terms, adds 23 terms, deletes 5 terms, and leaves 13 terms essentially unchanged, for a total of 36 defined terms in the regulation.

The following terms have been added to the final rule to update the terms used in part 810 to make them consistent with terms used in other U.S. export control programs and Nuclear Suppliers Group (NSG) guidelines (IAEA Information Circular [INFCIRC] 254/Part1): assistance, cooperative enrichment enterprise, development, enrichment, fissile material, fundamental research, production, technical data, technology, and use. The following terms are added or revised in line with changes in the approach of the final rule to authorized destinations and authorized activities: foreign national, general authorization, operational safety, production accelerator, production accelerator-driven subcritical assembly system, production subcritical assembly, publicly available information, publicly available technology, and specific authorization. The term “country” has been added to clarify that Taiwan is covered under this final rule, consistent with section 4 of the Taiwan Relations Act (22 U.S.C. 3303). The terms “Secretary” and “DOE” were added to define administrative terms. The following terms are retained with no change except technical edits or format changes: “Agreement for cooperation”, “Atomic Energy Act”, “classified information”, “IAEA”, “NNPA”, “NPT”, “nuclear reactor”, “person”, “production reactor”, “Restricted Data”, “sensitive nuclear technology”, “source

material”, “special nuclear material”, and “United States”. The following terms have been deleted as unused: “accelerator-driven subassembly”, “non-nuclear-weapon state”, “open meeting”, “public information”, and “subcritical assembly”.

Several changes from the definitions proposed in the SNOPR are made in the final rule including: “technical assistance” is changed to “assistance,” the term “technical assistance” is replaced with “assistance” in the definition of “technology”, and the term “technical services” is replaced with “assistance” in the definition of “sensitive nuclear technology”. These changes are explained in section IV.D. in response to public comments on the SNOPR.

5. Sections 810.4 “Communications” and § 810.5 “Interpretations” update points of contact information to reflect the current DOE organizational structure and office designations for applications, questions, or requests. Section 810.4(c) has been added to allow communication, fast-track requests, and Ukraine notifications to be e-mailed. The final rule adds paragraph (c) to § 810.5 that states DOE may periodically publish abstracts of general or specific authorizations, excluding applicants’ proprietary data and other information protected by law from public disclosure, that may be of general interest.
6. The 1986 version of § 810.6 “Authorization requirement,” which quotes § 57 b. of the Atomic Energy Act, is deleted and replaced by § 810.1 “Purpose.”
7. The 1986 version of § 810.7 “Generally authorized activities” is re-numbered as § 810.6. It identifies activities the Secretary has found to be not inimical to the interest of the United States if conducted in a destination listed in the Appendix to the final rule. The introductory text eliminates the specific reference to § 57 b.(2) of the Atomic Energy Act.
 - (i) Paragraph (a) generally authorizes assistance or transfers of technology to destinations listed in the Appendix to the final rule. The 1986 version of § 810.8(a) uses the opposite classification approach. It lists destinations for which a specific authorization is required.

- (ii) The 1986 version of § 810.7(a) “furnishing public information” is deleted from the list of generally authorized activities because under the final rule “public information” is no longer a defined term. Specifically, in § 810.2(c)(2) of the final rule, “publicly available information,” “publicly available technology,” and the results of “fundamental research” (all as defined in § 810.3 of this final rule) are exempt from the scope of part 810.
- (iii) In a new approach to deemed exports, § 810.6(b) of this final rule generally authorizes nuclear technology transfers to citizens or nationals of specific authorization destinations who are lawfully employed by or contracted to work for nuclear industry employers in the United States, subject to such individuals meeting NRC unescorted access requirements and executing a confidentiality agreement to prevent unauthorized disclosure of nuclear technology to which those individuals are afforded access. Deemed export reporting requirements with respect to these individuals are set forth in § 810.12(g).
- (iv) The existing “fast track” general authorization in the 1986 version of § 810.7(b) for emergency activities at any safeguarded facility and operational safety assistance to existing foreign safeguarded reactors has been retained in §§ 810.6 (c)(1) and (c)(2) of the final rule, respectively, but with a revised definition of “operational safety.” Paragraph (c)(1) includes the phrase “in DOE’s assessment,” modifying the emergency clause to make DOE responsible for deciding potential “other means.” Furnishing operational safety information or assistance to existing safeguarded civilian nuclear reactors outside the United States in countries with safeguards agreements with the IAEA or an equivalent voluntary offer, for example, performance of probabilistic risk assessments, is authorized in § 810.6(c)(2). In § 810.6(c)(2) the SNOPR proposed to include an option to provide information cited in § 810.11(b). This proposal has not been adopted in the final rule.

- (v) Furnishing operational safety information or assistance to existing, proposed, or new-build nuclear power plants in the United States is authorized in § 810.6(c)(3), for example, participation in safety assessments by organizations such as the Institute of Nuclear Power Operations (INPO).
 - (vi) Section 810.6(d) generally authorizes exchange programs approved by the DOS with DOE consultation. Sections 810.6(e) and (f) authorize certain cooperative activities with the IAEA, namely, activities carried out in the course of implementation of the “Agreement between the United States of America and the [IAEA] for the Application of Safeguards in the United States”; and those carried out by full-time employees of the IAEA, or by individuals whose employment or work is sponsored or approved by the DOS or DOE. The final rule replaces the word “and” with the disjunctive “or” at the end of subparagraph (f) to clarify that any of the listed activities are generally authorized.
 - (vii) Section 810.6(g) is a new provision that authorizes transfers of technology and assistance for the extraction of Molybdenum-99 from irradiated nuclear material in certain circumstances.
8. Section 810.7 – renumbered from the 1986 version of § 810.8 – “Activities requiring specific authorization” continues to list activities that require a specific authorization for all foreign destinations. The initial phrase “Unless generally authorized by § 810.6” proposed in the SNOPR has been removed as unnecessary.
9. Section 810.8 “Restrictions on general and specific authorization” remains unchanged from § 810.9 in the 1986 version of the rule, except for the following editorial revisions: replacing “these regulations” with “this part” in the introductory phrase; replacing “Restricted Data and other classified information” with “classified information” in paragraph (a), and replacing “Government agencies” with “U.S. Government agencies” in paragraph (b).

10. Section 810.9 “Grant of specific authorization” of the final rule, § 810.10 of the 1986 version, identifies the factors consistent with U.S. international nonproliferation commitments that will be considered by the Secretary in granting a specific authorization. Paragraph (b) adds as factors to be considered: whether the government of the country concerned is in good standing with respect to its nonproliferation commitments (subparagraph (b)(3)); and whether, under subparagraph (b)(8), the transfer is part of an existing “cooperative enrichment enterprise” (as defined in § 810.3 of this final rule) or the supply chain of such an enterprise. Section 810.9(c) addresses the export of “sensitive nuclear technology” as the quoted term is defined in § 810.3 of this final rule. This section is expanded to describe additional factors, which include compliance with the United States’ NSG commitments, the Secretary will take into account when considering a specific authorization request for transfers of sensitive nuclear technology. The United States adheres to the NSG Guidelines for Nuclear Transfers, and NSG Guidelines for Transfers of Nuclear-related Dual-Use Equipment, Materials, Software and Related Technology (IAEA INFCIRC/254/Part 2). The current versions of both sets of Guidelines can be found at www.nuclearsuppliersgroup.org. In the final rule a new paragraph (d) is added to § 810.9 concerning requests to engage in authorized foreign atomic energy assistance activities related to the enrichment of source material and special nuclear material. Approval of such requests will be conditioned upon the receipt of written nonproliferation assurances from the government of the destination country concerned. This process is designed to facilitate U.S. conformity to the NSG Guidelines.
11. Section 810.10 “Revocation, suspension, or modification of authorization,” as renumbered from the 1986 version of § 810.11, makes an editorial revision, changing “authorized assistance” in paragraph (c) to “authorization governed by this part.”
12. The 1986 version of § 810.12, renumbered in the final rule as § 810.11 “Information required in an application for specific authorization,” is expanded to add more detail about the information

required for DOE to process a specific authorization request, including applications for “deemed export” and “deemed re-export” authorizations. Section 810.11(a) of the final rule requires the submission of the same information required by the 1986 version of the rule (§ 810.12(a)).

The 1986 version of § 810.12(a) required that an application for specific authorization include information regarding “the degree of any control or ownership by any foreign person or entity”. Since the term “foreign person” is used only once in the 1986 version of the regulation (in § 810.12(a)), DOE proposed in the SNO PR to revise proposed § 810.11(a) without reference to “foreign person”. To avoid any possible confusion between usages of “person” and “foreign national”, the final rule adopts this change and § 810.11(a)(1) requests information concerning an applicant’s foreign ownership or control by asking about “the degree of any control or ownership by any foreign individual, corporation, partnership, firm, association, trust, estate, public or private institution or government agency”.

The SNO PR proposed in paragraph (b) to solicit any information the applicant wishes to provide concerning the factors listed in proposed §§ 810.9(b) and (c). However, this proposal has not been adopted. Instead, specific required applicant information has been added to § 810.11(a)(3) of the final rule. Therefore, proposed § 810.11(c) of the SNO PR is renumbered § 810.11(b) in this final rule. Likewise, proposed § 810.11(d) of the SNO PR is numbered § 810.11(c) in this final rule.

Section 810.11(b) addresses the required content for applications filed by U.S. companies seeking to employ in the United States citizens or nationals of specific authorization countries that could result in the transfer of technology subject to §§ 810.2 or 810.7 (deemed exports). Submission of the same information is also required with respect to any such citizen or national whom the part 810 applicant seeks to directly employ abroad in either a general or specific authorization country (a deemed re-export) that could result in the export of assistance or transfer of technology requiring a specific authorization. As proposed in the SNO PR, and adopted in the final rule, no part 810

authorization is required for an individual who is lawfully admitted for permanent residence in the United States or is a protected individual under the Immigration and Naturalization Act (8 U.S.C. 1324b(a)(3)).

As proposed in the SNO PR and adopted in the final rule, § 810.11(b) makes explicit DOE's current practice of requiring an applicant for a specific authorization to provide detailed information concerning the citizenship, visa status, educational background, and employment history of each foreign national to whom the applicant seeks to grant access to technology subject to the part 810 regulation. The applicant is also required to provide a description of the subject technology, a copy of any confidentiality agreement between the U.S. employer and the employee concerning the protection of the employer's proprietary business data from unauthorized disclosure, and written nonproliferation assurances by the individual. Section 810.11(b)(3) has been revised to eliminate the reference to § 810.6(b)(2), and reduce cross-referencing in the document.

Finally, § 810.11(c) identifies the information required to be submitted by an applicant seeking a specific authorization to engage in foreign atomic energy assistance activities related to the enrichment of fissile material.

13. The 1986 version of § 810.13 is renumbered as § 810.12 in the final rule and changes reporting obligations. An addition in § 810.12(d) of the final rule requires companies to submit reports to DOE concerning activities requiring specific authorization, to include information required by U.S. law concerning specific civil nuclear activities in or exports to destinations for which a specific authorization is required. Under § 810.12(e)(4) of the final rule the reference to reporting on materials and equipment transferred under a general authorization is retained to ensure, among other things, that any technical data that is transferred as part of dual-use equipment is reported. In this final rule, paragraph (g) describes the reporting requirements of U.S. employers with respect to their deemed export and deemed re-export employees.

14. The 1986 version of § 810.14 is renumbered in the final rule as § 810.13, “Additional information.”

The section is otherwise unchanged.

15. In the final rule, a new § 810.14 has been added to describe specific reporting requirements with respect to Ukraine. While the SNO PR contained a proposal to move Ukraine to the general authorization list, that proposal was made prior to the current geopolitical situation in that country. In light of those circumstances, DOE is finalizing its SNO PR proposal with the inclusion of advance notification requirements prior to beginning any generally authorized activity in Ukraine. A written report within 10 days following the original transfer of material, equipment or technology is also required for all activities in Ukraine subject to part 810. A more detailed explanation of the reason for this addition is in Section IV.B.2.

16. Section 810.15 “Violations” retains the same section number in the final rule as it has in the 1986 version of the rule, although it was proposed to be renumbered in both the NOPR and the SNO PR. Section 810.15 in the final rule contains a number of revisions that bring the wording into alignment with the applicable statutory language.

17. Section 810.16, “Effective date and savings clause”, which was proposed to be renumbered in the NOPR and the SNO PR, retains the same section number in the final rule as it has in the 1986 version of the rule. The only change to the language, as proposed in the SNO PR, is an extension of the date persons must come into compliance with the rule from 90 to 180 days.

18. In this final rule, Croatia is added to the Appendix list of generally authorized destinations because on July 1, 2013, it joined the European Atomic Energy Community (Euratom) and therefore the provisions of the peaceful nuclear cooperation agreement entered into pursuant to AEA § 123 (“123 Agreement”) between the United States and Euratom apply to supply to Croatia of U.S. nuclear material and equipment. Vietnam is also added to the Appendix list of generally authorized destinations because on October 3, 2014, a 123 Agreement between Vietnam and the United States

entered into force. Thailand has been deleted from the list of generally authorized destinations because its 123 Agreement with the United States has expired and there has not been a decision to renew the Agreement. In this final rule, a reference has been added to the Appendix list regarding Ukraine, in order to ensure applicants are aware of the added requirements in § 810.14 of the final rule, as discussed in Section IV.B.2.

19. DOE/NNSA recently changed the name of the Office of Nonproliferation and International Security (NA-24) to the Office of Nonproliferation and Arms Control (NPAC). The final rule in §§ 810.4, 810.5, 810.9, and 810.12 reflect this change.

III. Transition Process to Final Rule

DOE recognizes that, as a result of the rule announced today, some persons will have foreign atomic energy assistance activities in process concerning destinations whose general authorization or specific authorization status has changed. This section describes actions to provide a seamless transition to the final rule.

A. Current Specific Authorization Requests

Any pending specific authorization request for a destination that is now generally authorized in the final rule, namely, Croatia, Kazakhstan, Ukraine, United Arab Emirates, and Vietnam, should be withdrawn starting on the effective date of the rule. Contact DOE to formally withdraw the request. Pending requests for specific authorization to Ukraine are subject to the 10-day notification requirement set forth in § 810.14(a) of the final rule.

B. Current Generally Authorized Activities

As stated in § 810.16, generally authorized activities for which the contracts, purchase orders, or licensing arrangements were already in effect before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, but that require specific authorization under the

final rule, must be the subject of a specific authorization request by **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** but may continue until DOE acts on the request.

C. Previously Unreported Deemed Exports and Deemed Re-Exports

DOE recognizes that many companies with employees who are citizens or nationals of countries now subject to specific authorization requirements under the final rule announced today may not have previously reported the transfer of part 810 covered technology to such individuals to DOE under the 1986 version of the rule, as required, and further, that in many cases technology transfers already have occurred. A record of part 810-controlled generally authorized technology transfers to these employees is necessary for DOE to adequately monitor these transfers. Companies that have made unreported generally authorized transfers should provide the information required by § 810.11 of the final rule for each transfer to any foreign national who continues to have access to part 810-controlled technology by **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

IV. Discussion of Public Comments and the Final Rule

On August 2, 2013 DOE published the SNO PR, inviting public comments on regulatory proposals DOE formulated in consideration of comments received on the NOPR. Thereafter, DOE held two formal public meetings to give the public an opportunity to make oral comments and ask questions about the proposed regulatory changes in the SNO PR. In addition, DOE extended the time period for the public to submit written comments on the SNO PR. DOE received comments from 26 industry members and organizations. The majority of commenters expressly supported some of the SNO PR changes to the NOPR, such as proposals:

1. Limiting the scope of technology covered by part 810
2. Generally authorizing deemed exports to certain U.S. nuclear industry employees

3. Facilitating nuclear safety and other exchange activities
4. Generally authorizing nuclear technology exports to Mexico, Chile, Kazakhstan, Ukraine, and the United Arab Emirates
5. Continuing the general authorization for emergency activities and operational safety assistance
6. Proposing that
 - a. Routine storage, processing, and transportation of spent nuclear fuel would be outside the scope of part 810,
 - b. Activities licensed by the DOS and DOC would be outside the scope of part 810, and
 - c. The transfer of publicly available information would be outside the scope of part 810.

Commenters also supported DOE's initiation of a process improvement program (PIP) to reduce specific authorization processing time, and DOE's plan to create a guide to part 810 and an electronic application and tracking (e-810) system. Several organizations and companies offered to participate in developing the PIP and drafting a guide.

The Nuclear Energy Institute (NEI), the primary industry trade association, provided a comprehensive set of comments in response to the SNOPR. The Ad-hoc Utility Group (AHUG), Exelon, and the Chamber of Commerce of the United States (USCC) fully endorsed NEI's comments. AREVA and the US India Business Council (USIBC) supported NEI's comments. Black and Veatch endorsed NEI's comments. Westinghouse stated that it "largely concurred" with NEI comments. In this discussion of the public comments, unless these commenters provided different perspectives on the same matter, NEI will be referenced when discussing the comments.

Many commenters, including the American Nuclear Society (ANS), AREVA, Babcock and Wilcox (B&W), the Center for Strategic and International Studies (CSIS), EnergySolutions, Exelon, Fluor, G.C. Rudy/Integrated Systems Technology (IST), NEI, the Nuclear Infrastructure Council (NIC), and Westinghouse, also made requests for guidance or clarification on part 810 that would not

require a change from the regulatory text proposed in the SNOPR. Depending on the specific nature of these requests, DOE may address each request as part of a formal guide, more informally as part of a Frequently Asked Questions (FAQ) page on the proposed website, or in response to individual requests made pursuant to § 810.5 – Interpretations.

This final rule implements the important goals of part 810:

- Effective nuclear proliferation threat reduction,
- Effective civil nuclear trade support, and
- Efficient regulation.

DOE has reviewed the public comments received in response to the SNOPR. The final rule adopts most of the regulatory revisions proposed in the SNOPR, and incorporates some further changes based on careful consideration of public comments. The public comments were analyzed and placed into three categories:

- Process Issues
- Classification of Foreign Destinations
- Activities Requiring Part 810 Authorization

A. Process Issues

1. Compliance with Administrative Procedure Act rulemaking requirements

NEI in part claimed the SNOPR violated the Administrative Procedure Act (APA) by providing inadequate explanation of the proposed changes, particularly the proposed general vs. specific authorization destination classifications. NEI included China, Russia, and India in this discussion, although these three countries have been, and remain, destinations requiring specific authorization. NEI, in 80 pages of comments on the destination classification issue, called for DOE to “withdraw and re-publish the rule with enough information regarding its factual, legal and policy rationales to allow

stakeholders to comment meaningfully.” AREVA stated “DOE has not put forth a sufficient rationale for the change in designation of these countries.” AUECO “join[ed] the U.S. Chamber of Commerce in calling upon DOE to withdraw the rule.” In response to these concerns and comments, and the desire to hear from as many commenters as possible, DOE re-opened the comment period to allow for more public comments.

The SNOPR preamble adequately and reasonably explained the reasons for DOE’s proposed reclassification of foreign destinations, as well as other proposed changes to the part 810 regulation. It also explained the reasons why DOE proposed the Secretary could not generally authorize nuclear technology transfers to China, Russia, and India. Adequate notice was provided for meaningful comments from the public on the SNOPR as evidenced by 26 separate letters of comments submitted to DOE, including lengthy and detailed comments from NEI and AREVA. DOE’s new approach in the final rule to classifying general and specific authorization destinations is a reasonable policy decision, made in compliance with the requirements of the APA and as authorized by the AEA.

2. Part 810 process improvements

As noted in the SNOPR, many NOPR commenters were concerned that the part 810 specific authorization process is unduly protracted, and that processing delays put U.S. suppliers at a competitive disadvantage with companies in other countries. It appeared that many concerns with the NOPR and SNOPR proposals indicated less dissatisfaction with the merits of the proposed regulatory changes than the commenters’ belief that the proposed rule revisions would continue or worsen delays in receiving specific authorizations.

AHUG, ANS, AREVA, B&W, CSIS, EnergySolutions, Exelon, Fluor, GC Rudy/IST, NEI, NIC, and Westinghouse all made suggestions and comments related to improving the processing of specific authorization requests. In many cases these comments reiterated those received during the

NOPR comment period. As these comments are not directed to the content of the proposed rule, they will not be addressed here but rather in the PIP that is ongoing currently.

Similarly, commenters' concerns about process "burdens" appeared to drive their comments about the substance of the proposed regulatory changes. As noted, DOE proposed and has underway a PIP separate from the rulemaking to make the part 810 authorization process more transparent, orderly, and efficient in order to address specific authorization time in process.

The part 810 PIP is part of a larger NNSA plan to be ISO 9001 compliant. The PIP team will focus on improving performance as measured by these critical to quality characteristics:

- Effective nuclear proliferation threat reduction in a changing world,
- Openness, predictability, and clarity of regulation, and
- Efficiency: performing the mission of preventing proliferation without wasting time, money, or placing unnecessary burdens on U.S. companies competing in global markets.

The PIP team also will:

- Measure process performance by listening to applicant "customers" and process implementers. Receiving these inputs will be key to realistic problem definition and development of effective process improvements.
- Analyze causes of delays in DOE processing time for an application.
- Recommend actions to sustain improved performance in processing part 810 applications for specific authorization.

Anticipated improvements in the processing time of part 810 applications that may come from the PIP include these recommended actions from commenters:

- **Digitize the 810 authorization process (e810)** -- Digitization of the authorization process will make the applications easier to complete; streamline the review process, increase transparency by enabling applicant tracking; provide a searchable archive of past decisions; and facilitate

audits required for ISO compliance. In this rule, DOE has added explicit e-mail communication options, including applications, fast-track requests, and Ukraine notifications in § 810.4(c).

- **Reduce application processing time** – This effort will begin by DOE analyzing the authorization case database to determine causes of processing time variation and undue delay. The PIP team will conduct benchmark studies to identify best practices and methods to improve efficiency. The team will work with the DOS to find ways to request and secure foreign governments’ nonproliferation assurances more promptly, and make internal DOE and inter-agency reviews of part 810 specific authorization applications more efficient by reducing unnecessary reviews and approvals.
- **Develop a guidance document** -- Many SNOPR commenters sought guidance or clarification on specific issues and recommended DOE prepare a guidance document or website to improve transparency. As noted above, DOE intends to develop a document or website that may include responses to requests made under § 810.5 (with proprietary information redacted), FAQs, and process maps of various part 810 activities. DOE will continue to adhere to current inter-agency procedures for processing, reviewing and approving specific authorizations as set forth in the “Amendment to Procedures Established Pursuant to the Nuclear Nonproliferation Act of 1978.” 49 FR 20780 (May 16, 1984).

B. Classification of Foreign Destinations

The general authorization versus specific authorization proposed country classifications provoked considerable comments in response to the NOPR. The SNOPR explained the rationale for the proposed changes and proposed to change some classifications. Many of the NOPR comments were repeated in SNOPR comments. AHUG, AREVA, AUECO, B&W, CSIS, EnergySolutions, Electric Power Research Institute (EPRI), Exelon, Fluor, National Association of Manufacturers (NAM), NEI,

NIC, USIBC, U.S. Russia Business Council, and Westinghouse all expressed concerns with the reclassification of countries that was proposed in the SNO PR.

AHUG cited Chile, Jamaica, Jordan, Namibia, New Zealand, Nigeria, and the Philippines as countries that deserved generally authorized status “due to their participation in key international nuclear nonproliferation regimes, including the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the comprehensive safeguards agreement (CSA) with the IAEA and an Additional Protocol (AP) thereto, and the NSG”. Further, they noted that New Zealand and the Philippines have been granted a general license pursuant to 10 CFR 110.26 under NRC’s regulations as destinations authorized to receive “minor” reactor components.

B&W named Saudi Arabia, Jordan, the Philippines, and Malaysia, and Fluor named the Philippines and Singapore as countries that deserved generally authorized status, but provided no specific arguments regarding their suitability for the non-inimicality determination mandated by AEA § 57 b.(2).

EnergySolutions commented “The Department has failed to account for the burden imposed by the proposed rule and the message it sends to foreign nations.” The company repeated the claim it made in response to the NOPR that reversing the approach to country designations was unwarranted. In its comments on the SNO PR, *EnergySolutions* further commented “the SNO PR sends a message to countries that have not been considered a proliferation risk for over 70 years and have maintained safe nuclear operations, that the United States now views them as a potential liability. While the Department may view this new Rulemaking as a way to provide additional oversight to trade countries, *EnergySolutions* fears that it has the potential to adversely affect foreign relations with our trading partners.”

DOE has considered commenters’ recommendations for countries to be reconsidered for classification as generally authorized destinations. Under section 57 b.(2) of the AEA, the Secretary

may authorize the transfer of nuclear technology for the development or production of special nuclear material by persons subject to U.S. jurisdiction upon a determination that the activity will not be “inimical” to the interest of the United States. Classification of activities and foreign destinations as “generally authorized” or, conversely, the determination that other activities and destinations necessitate a specific authorization is a matter committed to agency discretion. The Secretary’s decision that a specific authorization is or is not required for a proposed transaction is based on U.S. nuclear and national security policies. Consonant with those policies, the Secretary may determine that transactions with a country or entity are either generally authorized or require a specific authorization. Under the AEA, DOE is to promote widespread participation in the development and utilization of atomic energy for peaceful purposes. The AEA, however, makes national security the paramount concern. Consequently, assistance to, participation in, or technology transfer for the development or production of special nuclear material outside the United States may be authorized only upon a determination by the Secretary that such activities will not be “inimical to the interest of the United States”. A destination is included on the proposed generally authorized list based on the Secretary’s “not inimical” determination required by section 57 b. (2) of the AEA. Examples of types of considerations taken into account include the existence of a 123 Agreement with the United States, a full scope safeguards agreement with the IAEA, satisfactory experience as a civil nuclear trading partner, and being a party to nonproliferation treaties and membership in international nonproliferation regimes. That determination can be made only with the concurrence of the DOS and after consultation with the NRC, the Department of Defense (DOD), and the DOC.

DOE appreciates commenters’ recommendations for countries to be reconsidered for classification to generally authorized status. However, classification of activities by destination as “generally authorized” is an administrative tool to avoid unnecessary reviews of foreign atomic energy assistance activities in countries that present little or no proliferation risk, and are known nuclear

trading partners. General authorizations reflect the assessment that the Secretary has made a non-inimicality finding regarding the provision of assistance and technology to particular countries on an advance programmatic basis, without performing a transaction-specific analysis or obtaining specific nonproliferation assurances from the government of the intended foreign recipient.

The world has changed since the original part 810 rule was issued. The creation of new countries and the threat of proliferative activities in countries with limited ability to manage or deter such threats must be considered in the Secretary's determination of non-inimicality. The Secretary has considered that being a party to nonproliferation treaties (including but not limited to other regional treaties such as the Treaty for the Prohibition of Nuclear Weapons in Latin America (Treaty of Tlatelolco), African Nuclear Weapon Free Zone Treaty (Treaty of Pelindaba), South Pacific Nuclear Free Zone Treaty (Treaty of Roratonga)), while an important part of such a determination is not alone sufficient to make a finding of non-inimicality. The NRC's regulation at 10 CFR 110.26 is limited to reactor components only for reactors generating less than 5MW, which is not an adequate indication of a country's ability to manage nuclear technology and prevent its use in ways "inimical to the interest of the United States."

No comments were received regarding the SNO PR proposal to remove Bangladesh and Peru from the generally authorized destination list; therefore the proposed deletion is retained in the final rule.

The final rule retains the destination classifications proposed in the SNO PR unchanged, except for clarification concerning the availability of general authorizations for Ukraine (§ 810.14) and the addition of Croatia and Vietnam as generally authorized destinations and the removal of Thailand. DOE will provide notice of future changes to the Appendix in the Federal Register.

1. Mexico

EPRI noted that additional IAEA agreements beyond INFCIRC/203 and INFCIRC/825 with Mexico may be developed, and suggested clarifying language to allow countries concluding such agreements to be included in the general authorization destinations Appendix list to the final rule. DOE has decided not to incorporate such changes in the final rule. While DOE is prepared at present to include Mexico on the Appendix list, on the basis of its agreement with the IAEA, DOE has determined to approach other such agreements on a case-by-case basis.

2. Ukraine

The Secretary's decision that a specific authorization is or is not required for a particular proposed export is based on U.S. nuclear and national security policies. When the existing regulations were promulgated in 1986, Ukraine was not a party to any international nuclear cooperation agreements. Ukraine has since entered into a 123 Agreement with the United States, has engaged in civil nuclear trade with the United States under the 123 Agreement, and has developed a track record as a responsible nuclear nonproliferation partner.

Moreover, Ukraine is heavily dependent on nuclear reactors for generation of electricity. Currently, there are 15 operating reactors in Ukraine that generate about 50% of the electricity used there. While Ukraine is now a civil nuclear trading partner of the United States, these reactors rely almost entirely on services and nuclear fuel from the Russian Federation to operate. Recent geopolitical developments in Ukraine involving the Russian Federation underlie the U.S. Government's determination to help ensure that Ukraine is able to maintain a stable civil nuclear energy program independent of and without support from the Russian Federation.

However, transfers of nuclear technology and assistance to areas that are not under control of the Government of Ukraine could present a proliferation risk, and a case-by-case non-inimicality determination is needed for transfers to those areas. For this reason, § 810.14 in the final rule identifies

an additional requirement, for persons about to begin any generally authorized activity involving Ukraine, to notify DOE at least ten days prior to beginning such activity. Following notification of a proposed transfer to Ukraine pursuant to § 810.14, the Secretary may invoke the authority in § 810.10 (c) if he determines that transfer is inimical to the interest of the United States at that time. Thus, that transfer would not be considered generally authorized and the applicant would need to file a request for specific authorization in accordance with §§ 810.7 and 11.

3. Croatia and Vietnam

NEI noted that “Croatia, now a member-state of the European Union, should be added to the Appendix.” In addition, as noted in section II, Vietnam, as of May 26, 2014 signed a 123 Agreement with the United States, and that agreement entered into force on October 3, 2014. DOE has added both Croatia and Vietnam to the list of generally authorized destinations in the Appendix to this final rule.

4. Continued specific authorization destinations (Russia, India and China)

B&W, EnergySolutions, Fluor, Lightbridge, and NEI all repeated comments on the NOPR regarding DOE’s proposal to retain Russia, India, and China as destinations requiring specific authorization. Some disagreed with the SNOPR’s explanatory rationale in section IV.B.2, but failed to provide sufficient justification to warrant any change in the current specific authorization status of these three countries.

After duly considering the comments and consulting with the DOS, DOC, DOD, and NRC, the Secretary remains of the view that it is not appropriate to change the part 810 specific authorization status of these three countries at this time for the same reasons as articulated in the SNOPR in section IV.B.2.

5. Thailand and Norway

The Appendix to the final rule has been changed from the SNOPR to omit Thailand, whose 123 Agreement with the United States has expired. As there has not been a decision regarding renewal of the Agreement at this time, under this final rule Thailand will therefore be a specifically authorized destination.

The Appendix to the final rule includes Norway, whose 123 Agreement with the United States has expired. However, the United States and Norway are negotiating a renewal of the 123 Agreement. Thus, the Department has determined that Norway will remain a generally authorized destination under this final rule.

C. Activities Requiring Part 810 Authorization

1. Special nuclear material nexus requirement

As explained in SNOPR section IV.C.1, the Secretary has broad discretion to determine which activities indirectly constitute sufficient engagement or participation in the production of special nuclear material to bring them within the scope of part 810. The decision is based on the nature of the technology or assistance to be provided. As such, whether an activity is generally authorized is a matter of policy. A number of commenters (including; NEI, B&W, Westinghouse, Fluor, ANS, NIC, AREVA, EPRI and ERIN Engineering and Research Inc. (ERIN)) stated that the SNOPR resolved some of their concerns with the sufficiency of the nexus between some covered activities or technologies and the production of special nuclear material to be subject to part 810 but maintained that the scope remained too broad or unclear in some cases. NEI also supported the proposed exclusion from part 810 of technologies and assistance under the jurisdiction of the DOS and DOC and requested the same treatment for NRC-approved activities, which was already explicit in § 810.2(c)(1) as proposed in the SNOPR and adopted in the final rule.

NEI commented that DOE should limit the scope of part 810 to technologies that are “especially designed for the production or processing of special nuclear material,” such as enrichment, reprocessing, and production reactors. Adoption of this proposal would move light water reactor (LWR) technology outside the scope of part 810, even though it has been within the scope since the inception of part 810. Although LWRs are designed primarily for power production, they do directly produce plutonium, which is within the scope of part 810. Therefore, the final rule retains LWRs in the scope of part 810.

NEI and NIC further commented that there should be explicit exemptions or authorization for the transfer of sales, marketing or sourcing information, to provide U.S. business with more flexibility to operate in the very competitive international civil nuclear market because U.S. businesses are at a disadvantage to foreign competitors that are not subject to technology controls similar to part 810 requirements. DOE is not prepared to exempt the transfer of part 810-controlled technology based on the intent of the transfer but will consider the content of the transfer when making a determination of part 810’s applicability. That means that if part 810-controlled technical data is transferred in a bid, proposal, solicitation, trade show, or plant tour, the activity is subject to part 810 controls and requirements but if no such technical data is transferred, the activity is not within the scope of part 810 and therefore not subject to those controls.

NEI and B&W commented that the SNOPR lacked clear and justified thresholds for how much recipient control, modification or U.S. content in jointly developed technology would be enough to trigger part 810 coverage of an activity. NEI recommended that DOE adopt specific percentage values as *de minimis* thresholds based on the total value of technology to be transferred. NEI also proposed that only “enhancements” to foreign technology should be subject to part 810, but other changes, such as conforming foreign technology to U.S. codes and standards (commonly known as Americanization), should not generally make the transfer of technology subject to part 810. In a related comment,

TerraPower asserted that DOE should set a *de minimis* threshold of 5% ownership before that ownership must be disclosed in an application for specific authorization. The comments above are largely restatements of views expressed in response to the NOPR and were addressed in the SNOPR preamble (Section IV.C.13.). The SNOPR explained that a mechanistic approach is not appropriate for part 810 coverage determinations for authorization of activities such as cooperative enrichment enterprises and other technology transfers by collaborative enterprises. DOE will continue to make coverage determinations based on the specific facts of the proposed activity including but not limited to technology to be transferred, the significance of the technology to the production of special nuclear material, end user destination, and end use duration of the activity such as single transfer or an ongoing activity, rather than by mechanistic rule because the facts of each case are unique and not readily addressed by a *de minimis* threshold or characterization.

NEI reiterated its recommendation to add the term “control-in-fact” to the definition in § 810.3 and to apply the concept to the application of the scope of § 810.2(a)(1) as well as revisions and clarifications to that provision to include the term “control-in-fact.” NEI recommended that DOE explicitly include in § 810.2(a)(2) the clarification that foreign “licensees, contractors, or subsidiaries under [the] direction, supervision, responsibility or control” of persons described by the proposed rule in § 810.2(a)(1) are within the scope of part 810 only if the technology transferred is of U.S. origin. Further, NEI recommended that control be determined by reference to corporate governance arrangements, instead of the specific terms and circumstances of the proposed activity. DOE has considered this comment again and has determined to adopt § 810.2(a) and (b) as proposed without further revision. DOE will review the specific fact pattern of the activity that includes the transfer of part 810-controlled technologies, which in some cases may not match the stated governance or “control” of the company but which is specific to the technology transfer in question.

B&W, TerraPower, NEI, and AHUG also commented that the definition of “technology” should be revised to use the conjunctive “and” in place of “or” before “use” in proposed § 810.3, thereby limiting the scope of part 810 to activities and technologies directly associated with the production of special nuclear material, creating a minimum threshold for technology and assistance provided, and mirroring the wording currently guiding the NSG. The proposed use of the disjunctive “or” in the definition of “technology” in proposed § 810.3 was intentional. Any of the listed forms of assistance is sufficient to trigger part 810 coverage. It is not necessary to specify all of the technology forms; therefore the change has not been made to the definition.

AUECO commented that under the SNO PR, DOE would subject academic and scientific communications and research to new and burdensome deemed export requirements without sufficient statutory basis, and that burden would be further exacerbated by the general/specific authorization proposed reclassification of 77 countries. The SNO PR proposal, they argued, would jeopardize the free flow of academic collaboration that is explicitly protected by the AEA, without DOE identifying a clear or direct connection to the production of special nuclear material.

Part 810’s statutory basis is the AEA, which states its purpose is to “support the conducting, assisting and fostering of research in order to encourage maximum scientific progress” through the establishment of policies that benefit not only the development of technology but also, and paramount, the common defense and security of the United States. While part 810 requirements concerning deemed exports may apply in an academic setting, DOE understands that most work performed by academic institutions qualifies as fundamental research, which is exempt from part 810 coverage under § 810.2(c)(2) of the final rule. Issuance of the final rule does not constitute a new burden for academic institutions and comports with AEA purposes. It is those activities that go beyond fundamental research and are applied research and development that have always been within the scope of part 810 controls. No change has been made in this final rule in response to this comment.

AUECO and NEI welcomed the definition of “fundamental research” proposed in the SNO PR but commented that it fell short of protecting applied research and development at universities, which they argued is the intent of the AEA. The definition announced today achieves the intent of the AEA both to encourage fundamental research and to protect information whose dissemination is restricted for national security reasons. NEI also recommended revising the definition of “fundamental research” to exclude proprietary “industrial development” and “product utilization” from the definition. DOE wishes to clarify that proprietary development or utilization information is not exempted from controls in the final rule because development and use technology is beyond basic scientific exploration that is intended to remain outside the scope of part 810. Applied research crosses the boundary from theoretical scientific inquiry to potential reactor specific applications of new technologies. This type of research will not be generally authorized because it can be applied to a facility that could be involved in the production of special nuclear material. The definition of “fundamental research” in the final rule remains unchanged from that proposed in the SNO PR.

AUECO also commented that the SNO PR’s proposed definition of “publicly available information” did not address information that has been cleared for release by the appropriate entity but has not yet been officially released, and that lack of clarity on this point adversely affects academic institutions with respect to transferring nuclear technology to foreign national researchers. AUECO recommended that information that will be or is eligible for unlimited release should be considered “publicly available information” and therefore not subject to part 810 controls in academic settings. DOE considers information published in academic journals or otherwise available to the general public to be “publicly available technology” for the purposes of deemed exports prior to actual publication as long as the information has been appropriately authorized for release and there is a clear intent to publish all results, and directs commenters to examine the definition of “publicly available technology” for clarification. This subject will be dealt with in more detail in the PIP.

NEI also commented that the definition of “publicly available information” should conform to the text of and guidance concerning the ITAR (International Traffic in Arms Regulations) administered by DOS and DOC’s EAR (Export Administration Regulations). DOE has considered NEI’s request but has determined to retain the definition as proposed in the SNOPR because the definition as formulated in the final rule adequately and completely incorporates the characteristics of information that DOE considers to be publicly available.

2. Activities supporting commercial power reactors

NEI and B&W commented that controlling LWR technology is unnecessary, because it is ubiquitous and available more freely from many foreign vendors. Further, requiring a specific authorization for such technology to any country does little, in the commenters’ view, to stem proliferation and would hurt the competitive position of U.S. vendors. AHUG, Fluor, and NEI stated that requiring a specific authorization for U.S. vendors offering nuclear technologies that are identical or similar to those that have been previously approved for export burdens U.S. vendors, giving their competitors an advantage without a nonproliferation benefit. Both DOE and the commenters recognize that the harm to U.S. vendors is exacerbated by lengthy part 810 application processing time required to secure a specific authorization. DOE believes the way to resolve the time-in-process problem is through the PIP, not by relaxing the standards for the Secretary’s non-inimicality determination. It should be noted that the 1986 version of § 810.10(b)(7) expressly states that in making the non-inimicality determination, the Secretary will take into account “[t]he availability of comparable assistance from other sources”. The final rule retains this provision.

NEI and AUECO commented that the description and definition of the portions of the “nuclear reactor” that would be covered by part 810, as proposed in §§ 810.2 and 810.3 of the SNOPR, were an improvement from the NOPR and provided clarity, but did not align with the NRC’s part 110 Appendix A definition of a nuclear reactor. The proposed definition of “nuclear reactor” in § 810.3 in the SNOPR

is almost identical to the NRC definition in 10 CFR 110.2. Also, the proposed scope of part 810 controls concerning nuclear reactors has been aligned with the language used in NRC's part 110 Appendix A. Specifically, the wording "components within or attached directly to the reactor vessel, the equipment that controls the level of power in the core, and the equipment or components that normally contain or come in direct contact with or control the primary coolant of the reactor core" in § 810.2(b)(5) of the SNOPR has been adopted in today's rule to align directly with language used in Appendix A of NRC's part 110 regulation.

NEI further commented that the description of the scope of covered technologies concerning nuclear reactors proposed in § 810.2 of the SNOPR did not address the limits of application of the regulation to analogous components or systems in boiling water reactors and pressurized water reactors. As a general principle, DOE considers the technology related to the primary coolant in the reactor core as within the scope of part 810 controls. However, NRC's part 110 regulation specifically excludes the steam turbine generator portion of a nuclear power plant from its definition of a utilization facility. Since the definition and scope statement in the SNOPR's proposed rule were meant to align with part 110, DOE has determined that the steam turbine generator portion of a nuclear plant is licensed by the DOC and is not subject to part 810 requirements.

B&W commented that DOE should develop a list of Widely Available Technologies. B&W further recommended that DOE solicit national laboratory and industry input to publish and update the list through a Federal Register Notice. Per B&W's comment, the technology list would include an exhaustive list of technologies or assistance associated with those technologies and be generally authorized to non-embargoed countries. DOE has not added a widely available technology list to part 810 at this time because the Secretary has not made a non-inimicality finding about the transfer of technologies directly or indirectly related to the production of special nuclear material but rather the destination of those technologies. Instead, DOE will address technologies and approving the transfers

of them in the PIP. As a part of the PIP process, DOE will seek stakeholder input during planned outreach programs.

NEI, B&W, Fluor, AHUG, and NIC provided similar comments to the effect that if technology related to nuclear reactors continues to be defined as proposed in § 810.2 of the SNOPR, some formulation of a “fast track” or hybrid authorization process should be included in the regulation text or a general authorization provided for transfers of identified technologies. This process would not apply to technology transfers to embargoed or non-NSG member countries but all other specifically authorized destinations. Expediting the approval of nuclear reactor technology transfers to destinations requiring specific authorizations will be addressed in the PIP that is being conducted independently from this rulemaking. Therefore DOE will not incorporate a change or add a general authorization for nuclear reactor technologies at this time.

3. Deemed exports and deemed re-exports employee issues

AUECO, NEI, B&W, and Westinghouse repeated in response to the SNOPR their recommendation in comments on the NOPR concerning the transfer of part 810-covered technology to individuals who are citizens (including those with dual citizenship) of specific authorization countries but have lawful permanent residence in a generally authorized country. The commenters advanced the view that, in determining whether a specific authorization is required, DOE should follow the DOC policy of using the individual’s most recent country of citizenship or permanent residency to determine citizenship. Current DOE practice is to consider all countries of an individual’s allegiance (citizenship or permanent residency) in making the requisite non-inimicality determination. Authorization decisions in these situations are fact-specific, and DOE will continue to deal with them on a case-by-case basis. Therefore DOE is not incorporating this suggestion in the final rule.

ANS, AREVA, AUECO, NEI, and AHUG welcomed the general authorization proposed in the SNOPR at § 810.6(b) for foreign nationals working at NRC-licensed facilities who are granted

unescorted access in accordance with NRC regulations. The commenters also suggested expanding the general authorization to include foreign nationals working in the United States at non-NRC licensed facilities, based on NRC regulations governing access to safeguards information (SGI) or a U.S. security clearance for access to classified information. DOE determined that NRC's regulations and reviews governing unescorted access to NRC licensed facilities are much more detailed than SGI protection requirements, which mandate only a search by the Federal Bureau of Investigation to identify any criminal records of the individual for whom the applicant is requesting access.

Alternatively, for unescorted access to controlled technology in an NRC-licensed facility, an individual must undergo a stringent review in addition to complying with the SGI's requirement, including, but not limited to, a psychological interview, drug testing, and employment history check. After consulting with the NRC, DOE and NRC concurred that, for the reasons described above, SGI review criteria are not sufficient to justify providing a general authorization under part 810 for foreign nationals to have access to part 810-controlled technologies. In addition, DOE was unable to identify a cohort of foreign nationals who would have security clearances and are nationals of countries not on the part 810 Appendix list that would justify adoption of the suggestion in the final rule. No other regulatory regimes or persuasive factors were identified by the other commenters as a basis for DOE to make the requested change. Therefore, DOE has decided to adopt § 810.6(b) as proposed in the SNOPR.

NEI further requested that DOE should clarify in guidance that the general authorization for deemed exports would continue to apply to NRC-cleared individuals working in the United States for a U.S. company who are no longer working at the NRC-licensed facility, but who require access to part 810-controlled information. Under this suggestion, the authorization would extend to foreign nationals working in the United States at any U.S. company, even if unescorted access status has expired. DOE is not adopting this proposal in today's final rule because the termination of NRC unescorted access could occur for a variety of reasons which must be considered. DOE invites applicants with respect to the

requirements of § 810.11(b)(2) to document any NRC clearances granted to subject foreign nationals that may be used to inform DOE's determination of non-inimicality for the deemed export.

AREVA commented that positions requiring critical skill sets may go unfilled due to the increased number of foreign nationals working for AREVA in the United States and overseas that will no longer be eligible for a general authorization because under the SNOPR proposal, more countries would be specific authorization destinations, therefore restricting a larger number of possible hires from accessing part 810-controlled technology. In addition, AREVA stated that the provision would only address current employees but not address future hires and thus complicate hiring decisions. DOE has weighed this comment and understands that companies are concerned about burdens to comply with deemed export controls under the final rule, given the increase in the number of specifically authorized destinations. DOE will continue to require companies to seek authorization to provide access to part 810-controlled technologies to individuals who are citizens of specifically authorized countries because the transfer of technology to a citizen of a specific authorization destination is considered an export to that country and therefore deemed an export, which requires a Secretarial non-inimicality finding before the export can be authorized. But under the PIP, DOE will endeavor to institute efficiencies to decrease the review and approval times for deemed export authorizations.

Exelon stated that the cost of review of I-9 forms (required by U.S. Citizenship and Immigration Services) to determine the number of foreign nationals working at U.S. nuclear facilities who are citizens of specifically authorized countries will be overly burdensome and impede hiring and internal reassignments. In this regard, the final rule makes all employees granted unescorted access to an NRC-licensed facility generally authorized, obviating any need to research the citizenship status of employees who have been granted unescorted access to an NRC-licensed facility. In addition, the required I-9 forms provide readily available data on new foreign national employees that should help

companies determine whether a foreign national needing access to part 810-controlled information will require a specific authorization.

NEI and B&W both commented that the time frames in the supplemental proposed rule at § 810.15 were inadequate, DOE acknowledges that 90 days is too short a time for many entities to review internal compliance programs, review employment records, file reports with DOE on current foreign employees receiving part 810-controlled technology, and submit necessary requests for specific authorization, and in today's final rule DOE has therefore extended the transition period to 180 days.

Fluor commented that it is not reasonable for a U.S. company to treat its non-U.S. citizen employees working in offices/subsidiaries located in foreign countries differently (e.g., an employee who is a citizen of specific authorization country working in a country on the general authorization Appendix list would require a specific authorization to access part 810-controlled technology); and requested that foreign nationals employed at U.S. subsidiaries in countries not listed in the Appendix be eligible for a general authorization as long as the company can assure DOE that the part 810-covered technology transferred to the foreign national is protected from unauthorized disclosure. The final rule retains the approach, as implemented under the 1986 version of the rule and as proposed in the NOPR and SNOPR, to deemed re-exports. That is, whether a specific authorization is required for a foreign national (as defined in § 810.3) employed in a foreign country depends on the general or specific authorization designation of the foreign national's country of citizenship. Under the final rule, companies working with entities outside the U.S., whether or not they are wholly owned subsidiaries, are authorized either generally or through a specific authorization to transfer specific technology. DOE will continue to require compliance with the transfer of part 810-controlled technology no matter where the export takes place.

B&W and Fluor made a similar proposal: that DOE view part 810-controlled technology transfers to companies in some subset of countries (B&W proposed NSG member states) as eligible for

general authorization with respect to deemed re-exports, meaning the recipient entity would be generally authorized, as well as all its employees, regardless of citizenship, so long as the foreign nationals are employed legally (and in the case of Fluor’s comment, so long as a confidentiality agreement is in place). As noted above, DOE has determined to retain in the final rule adopted today the regulatory approach to deemed re-exports under the 1986 version of part 810 and in the NOPR and SNOPR.

B&W and NEI suggested that the language contained in § 810.11(c) as proposed in the SNOPR (§ 810.11(b) in the final rule) indicates that mere “employment” of a foreign national who is a citizen of a country not listed in the Appendix, by a U.S. company or its foreign subsidiary, would require a specific authorization. This is incorrect. Under the SNOPR and under today’s final rule, a specific authorization is required for the transfer of part 810-controlled technology or information to a foreign national, not merely employment of that individual by a U.S. company or its foreign subsidiary.

B&W and NEI also recommended that DOE streamline the proposed part 810 rule to clarify that U.S. companies are only required to comply with the proposed deemed export requirements to the extent that compliance does not violate applicable employment laws in those countries where a company’s foreign national employees are employed. The intent of § 810.11(b) as proposed and made final is to control technology transfers, not employment. It enables DOE to implement its authority to authorize re-exports of transferred technology. Companies may hire whomever they choose. However, the AEA is the foundation upon which the regulation at part 810 and makes clear that U.S. companies are not free to transfer part 810-controlled technology to employees who are citizens of countries that are not listed in the Appendix without a specific authorization or who meet the requirements of § 810.6(b) of the final rule.

NEI commented that as proposed in the SNOPR, a foreign national is required to interact with DOE to secure a specific authorization. That assertion is incorrect. DOE consent is requested by and

granted to the U.S. company-applicant under the rule, and not directly to the foreign national. It is the responsibility of the person subject to part 810 to ensure that transfers and retransfers of U.S. technology and assistance are under its control and take place in compliance with part 810.

AUECO commented that the rule “should also explicitly authorize deemed exports to foreign nationals of Appendix A [sic] countries who meet the requirements of § 810.6(b)(1, 2 and 4)...” This recommendation indicates a misreading of § 810.6. Proposed § 810.6(a) of the SNO PR explicitly authorizes specified activities with entities in countries listed in the Appendix. Section 810.6 proposed in the SNO PR and adopted in today’s final rule includes all nationals or citizens of countries listed in the Appendix for all activities except those described in § 810.7.

In conclusion, DOE carefully weighed the comments received concerning deemed exports and deemed re-exports. In the discussion above, DOE has provided clarity for issues raised by commenters, but has determined that it is unnecessary to make changes to the requirements for deemed export and deemed re-export authorizations as proposed in the SNO PR. DOE will address potential improvements for efficiencies for such applications in the PIP and continue to work directly with part 810 applicants that have fact-specific compliance questions.

4. Operational safety activities

AREVA, AHUG, and EPRI strongly supported the inclusion of the proposed definition of “operational safety” and the proposed general authorization provisions contained in the SNO PR for proposed § 810.6(c) (adopted as § 810.6(b) in the final rule). AHUG and EPRI provided comments and a red line text of the general authorization provisions at proposed § 810.6(c)(2) and (3) as well as the definition of “operational safety” contained in proposed § 810.3 to further expand the provisions. AHUG, NEI, and EPRI recommended that DOE consolidate proposed §§ 810.6(c)(2) and (3) into a single general authorization that focuses on the nationality of the recipients of the operational safety information or assistance rather than on the nuclear power plants. The commenters alleged that

proposed § 810.6(c)(2) would be applicable only to existing plants overseas, while proposed § 810.6(c)(3) would include new plants as well as existing plants in the United States and that DOE did not provide a clear rationale for its proposal. AHUG further commented that extending a general authorization as proposed in the SNOPR to include assistance to new nuclear power plants located in countries that are not eligible for a general authorization to ensure state of the art safety technologies and methodologies, including input from U.S. nuclear operators, are incorporated at the design phase of a reactor construction is crucial for the safety of nuclear plants.

Proposed § 810.6(c)(2) is intended to authorize U.S. companies to provide operational safety technologies and assistance to existing plants in foreign countries so they can meet specific national or international safety standards or requirements for operational safety. Proposed § 810.6(c)(3), on the other hand, is intended to authorize important benchmarking activities at plants in the United States by international entities or individuals, such as those conducted by the INPO, and NRC-sponsored and -approved activities. The difference in treatment between plants located in the United States and those overseas is intentional. Assistance to U.S. facilities is not assistance to foreign entities, and the incidental transfer of technical information to foreign nationals providing the assistance is not deemed by DOE to be a significant proliferation risk. However, providing information during the design and construction of a new facility in a destination requiring specific authorization constitutes a much higher proliferation risk, and requires DOE approval. The basis for the DOE decision to adopt the distinction between assistance to a foreign reactor and benchmarking in the United States remains the basis for § 810.6(c)(3) in the final rule. NRC-sponsored or -licensed activities in the United States or overseas are outside the scope of part 810, as explicitly provided in § 810.2(c)(1).

DOE also reviewed the proposed revision to the definition of “operational safety” provided by AHUG and EPRI. DOE proposed a definition of “operational safety” in the SNOPR that would broaden the scope of assistance and technology that could be generally authorized. The suggested revisions as

provided by AHUG and EPRI further broadened DOE's proposed scope and include services that are not considered merely safety but rather services to improve design and/or efficiencies of nuclear reactors. Because the general authorization relates only to operational safety, the broader definition that includes design improvements or efficiencies has not been adopted. DOE has not made revisions to the proposed definition of "operational safety", but rather is adopting unchanged in today's final rule the definition proposed in the SNOPR.

ERIN requested clarification on whether probabilistic risk assessments (PRAs) for existing nuclear power plants in foreign countries should be generally authorized. ERIN commented that PRAs do not fall within the scope of part 810 because the methodology is publicly available. Further, ERIN stated that while the information included in the PRA is specific to the power plant, no knowledge to design or operate the reactor more efficiently is transferred in the process of developing a PRA or the final report. DOE has considered this comment and agrees with ERIN's comment. DOE concludes in today's final rule that PRAs are generally authorized activities within the definition of "operational safety" for destinations typically requiring specific authorization. No change to the rule is required to address this comment.

NEI commented that in proposed § 810.6(c)(1) of the SNOPR the words "which emergency cannot be met by other means" should be deleted. NEI stated that it is not in the interest of the United States that persons subject to part 810 should, in the face of a current or imminent radiological emergency, spend time trying to demonstrate that no other means, foreign or domestic, could defuse that emergency, or that the proposed assistance is uniquely capable of successfully doing so. DOE declines to incorporate that suggestion because the phrase in question provides DOE with the latitude to make the determination that an activity can take place without the paperwork in place. This is the qualitative analysis that DOE, not the U.S. company, must conduct when considering such requests.

However, to clarify the intent, the phrase “in DOE’s assessment” has been added. The phrase now reads “which emergency in DOE’s assessment cannot be met by other means.”

5. Other

NEI reiterated its view that exercise of the Secretary of Energy’s statutory authority under § 57 b.(2) of the AEA to authorize persons to engage or participate in the development or production of special nuclear material outside the United States can and should be delegated; however, as the AEA in section 161 n. does not allow for delegation below the Secretary, the requested change has not been made in the rule. NEI also commented that some language proposed in the SNOPIR does not conform to the NSG Guidelines in some areas. The U.S. Government is a member of and fully supports the NSG; however, the legal underpinning of the part 810 regulation is U.S. law, namely, the AEA. The NSG Guidelines are adopted by the NSG by unanimous approval; thus, in some important instances the part 810 regulation will not conform to the NSG Guidelines but instead reflects U.S. law.

DOE will address with Enrichment Technology U.S. and Integrated Systems Technology the questions posed in their comments concerning the application of the final rule to their specific cases or authorization conditions. NIC recommended a users group be created for part 810 authorization recipients. After consideration of this request, DOE has decided that the need for a users group will be considered upon completion of the PIP.

TerraPower commented that clarification is needed concerning technologies and assistance associated with fuel research and development programs that could be viewed as analogous to reprocessing technologies and because, without a definition of “reprocessing” in the rule, there is room for misinterpretation. DOE has considered this comment and will address these specific concerns on a case-by-case basis because the technology has a number of aspects that may or may not constitute reprocessing depending on the specifics of the case. A definition could be too restrictive in some applications, and insufficient in others.

DOE will not address B&W comments concerning the extraterritorial application of the rule as this is outside the scope of this rulemaking. Other matters that were presented but are outside the scope of this rulemaking include: EPRI's comment that any revision of part 810 is unnecessary as the United States already has the most stringent and unilateral export controls in the world; and NIC's recommendations to modernize the AEA 123 Agreement process and conduct a 360-degree peer review of other nuclear technology export control regimes.

NEI submitted a number of editorial and clarifying revisions in a red lined document, including a proposal that proposed § 810.5(b) should include a timeframe for a response (NEI proposed 30 days). The proposed rule and this final rule already provide 30 days for responses to requests for advice. Specific authorizations frequently require interactions with foreign governments over whose response time DOE has no control, thus attempting to incorporate a timeline in the final rule would not achieve NEI's intended purpose of driving speedier DOE approvals. Putting a hard deadline in the rule would require DOE to reject the application if foreign government nonproliferation assurances could not be obtained within the mandated time, and would require the company to resubmit and restart the process. DOE will address timelines in the PIP and not in the final rule published today.

D. Technical Corrections

1. § 810.1

NEI recommended adding a clause to proposed § 810.1 "(d) Establish orderly and expeditious procedures for the consideration of requests for specific authorization under this part."

This phrase is, in part, a direct quote of § 57 b. of the Atomic Energy Act directing the adoption of procedures for processing part 810 specific authorization requests. Such procedures were issued in 1978 and amended in 1984. It does not add to the rule, nor does it create enforceable language that will either help applicants obtain their specific authorizations more rapidly or provide further direction to DOE. Therefore, DOE does not incorporate this recommendation into the final rule.

2. § 810.3 Technical Services

AUECO commented that there was no definition of “technical services” proposed in the SNOPR and requested clarification concerning whether the quoted phrase is different from the defined term “technical assistance.” The term “technical services” occurs only once in the 1986 version of the rule and in the SNOPR, in the definition of “sensitive nuclear technology.” To avoid the potential for confusion, DOE in today’s final rule has replaced “technical services” with “assistance” because they have the same intended meaning. A new definition of “assistance” has been added to § 810.3.

3. § 810.3 Technical Assistance vs. Assistance

NEI commented that “assistance” should be globally replaced with “technical assistance” or “assistance” should be defined.

The phrase “technical assistance” occurred only twice in the SNOPR beyond the definitions in proposed § 810.3. All usages of “technical assistance” in today’s final rule have been replaced with “assistance” and the definition modified accordingly. As noted, a new definition of “assistance” has been added to § 810.3.

In addition NEI commented that the phrase “as determined by the Secretary” in the definition of “assistance” should be deleted because “it is vague and open-ended and reduces certainty about what types of assistance are covered by Part 810. Any expansion of the reach of the regulation should be accomplished only by an amendment, subject to Section 553 of the APA. At a minimum, the rule should be clear that any controls asserted on the basis of Secretarial determination over specific types of technical assistance that are not listed in the rule should apply only prospectively.”

The definition of “assistance” includes a list of activities that can be construed as assistance, and cannot, by its nature, be a comprehensive description of all the ways persons may endeavor to assist persons in other countries with nuclear technology. The inclusion of the phrase “as determined by the Secretary” is intended to prevent circumvention of this rule by the mere renaming of activities to avoid

the descriptions included in this list. Therefore, based on consideration of the comment, DOE determined to retain the phrase in the final rule.

4. § 810.6(f)

NEI commented that DOE should delete the “and” at the end of § 810.6(f) proposed in the SNOPR to clarify that any one of the activities in subsections (a) through (g) of this section is independently generally authorized, rather than requiring that all of them be involved in order for the activity to be generally authorized.

DOE agrees with NEI and in this final rule replaces “and” with “or” to make the disjunctive nature of the list clear.

5. §§ 810.6(c)(2) and 810.11(b)

NEI requested that DOE clarify “that 810.6(c)(2) has correctly numbered references. It calls for information in 810.11(b), which refers the applicant to optional information from 810.9(b) and (c).”

The SNOPR proposed § 810.11(b), which provided applicants the option of providing information concerning the factors listed in §§ 810.9(b) and (c) of the SNOPR. DOE has determined that the factors are more properly considered by DOE in making non-inimicality determinations. Therefore, in the final rule § 810.11(b) as proposed in the SNOPR has been eliminated and § 810.11(c) as proposed in the SNOPR has been renumbered as § 810.11(b).

In the final rule, the phrase “and may provide information cited in § 810.11(b)” is eliminated from § 810.6(c)(2). The elimination of § 810.11(b) and subsequent renumbering also requires changes to § 810.11(a) that referenced § 810.11(b). This clause now references §§ 810.9(b)(7),(8), and (9).

6. § 810.16 Savings Clause

NEI and B&W both commented that the time frames in proposed § 810.15 were inadequate. B&W recommended a complete grandfathering of all current activities in countries moving from

general authorization to specific authorization classification. NEI pointed out that such activities were unlikely to be found problematic by DOE. NEI recommended a limited time frame and suggested that a lack of objection from DOE would constitute acceptance.

DOE acknowledges that 90 days is too short a time for many entities to request specific authorization for activities that were generally authorized prior to issuance of the final rule, and in today's final rule DOE has therefore extended the transition period to 180 days. However, a finding of non-inimicality cannot be met by DOE not meeting a deadline of any kind. Acknowledging that technology transfers have already occurred, the savings clause in the final rule provides that until DOE acts on an applicant's request, the applicant can continue its part 810-controlled current activities.

V. Regulatory Review

A. Executive Order 12866

Today's final rule has been determined to be an economically significant regulatory action under Executive Order 12866, "Regulatory Planning and Review," 58 FR 51735 (October 4, 1993). Accordingly, this action was subject to review under that Executive Order by the Office of Information and Regulatory Affairs of the Office of Management and Budget. The required economic impact analysis was prepared by DOE. AREVA, AUECO, George Mason University, and NEI commented that the economic analysis performed as a part of the rulemaking was based on flawed data sets or data from soft growth periods, which the commenters contended are not realistic in normal circumstances.

NEI's analysis is the most comprehensive of those provided and is used in this discussion of the economic impacts of this final rule. Rather than debate the assumptions between DOE's analysis and NEI's analysis, DOE accepts NEI's basic claim that different assumptions will result in different outcomes. NEI's critique claims that revisions to part 810 as proposed in the SNOPR would have an annual impact of \$10 million to the detriment of the U.S. nuclear industry.

In its analysis, NEI listed 14 key countries that will be moving from generally authorized to specifically authorized classification and based its conclusion concerning the economic impact of DOE's proposed regulatory revisions on these 14 countries. NEI did not provide any information about the specific opportunities provided in each country, so DOE has assumed it is roughly equal to \$700,000 per country per year. As Croatia was included in NEI's list, and since that country has been included on the Appendix list of generally authorized destinations, any impact should be reduced by \$700,000 per year, bringing the impact down to \$9.3 million per year.

NEI's critique also included a projected \$5 million per year impact for losses associated with deemed exports. The argument is related to an economic loss attributed to those companies that would be required to hire workers from countries that do not require specific authorizations. While the DOE does acknowledge that there is additional effort involved in hiring workers from these destinations into positions where part 810-controlled technology would be shared, the final rule does not preclude such hiring and, in fact, NNSA is working on a PIP to reduce this burden. Under the 1986 version of the rule a large number of the specific authorizations were, in fact, to allow such workers to work in those positions. However, for the sake of discussion, DOE accepts that there is an impact of \$2.5 million per year.

To be further conservative, DOE has omitted any potential additional positive impact of countries moving from specific authorizations to general authorization classification. Such changes serve to reduce the impact of this rule further. For example, Vietnam (although not one of NEI's identified 14 critical countries) has just entered into a 123 Agreement with the United States, and is included in the Appendix to the final rule as a generally authorized destination.

These corrections bring the net effect of the NEI based analysis to \$6.8 million per year, or roughly \$100 million over the analysis period (present to 2030). The Table below summarizes NEI's original assumption and DOE's corrections:

	Changes	Annual Impact (million/yr)	Impacts Through 2030 (millions)
NEI	Base	\$10	\$160
DOE Changes for Croatia's status as GA	\$0.7	\$9.3	\$148.8
DOE Changes for Deemed export impact	\$2.5	\$6.8	\$108.7

DOE's economic analysis compared the potential impacts on the U.S. nuclear exports of shifting countries from one type of authorization to another for three different nuclear capacity forecasts. Using the World Nuclear Association (WNA low projection), Nuclear Assurance Corporation, and UxC nuclear capacity forecasts; DOE estimated the potential for lost business in nuclear exports to range from \$20 to \$86 million per year over the 18-year window as potential export volume destined for countries moving from generally authorized to specifically authorized status. Using the same three nuclear capacity forecasts, DOE also estimated the potential impacts on U.S. nuclear exports associated with transferring technology to specifically authorized countries reclassified as generally authorized countries to be between \$86 to \$154 million per year.

DOE monetized the potential impact of the rule from moving countries from the GA to SA category and from the SA to the GA category. For countries moving from the GA to SA category, the monetary impact is expected to be negative, since specific authorization involves additional cost to applicants and time for DOE to process, and some small fraction of SA applications may ultimately not be approved. The impact of moving a country from the SA to GA category will, for the same reasons, is expected to be positive. DOE calculated the net effect on U.S. nuclear exports using the average

annual yearly trade derived from the WNA low projection from 2013 through 2030 and from four scenarios that assume 10% to 40% of annual yearly trade will be impacted either positively or negatively by the rule change. Using the 20% impact as the assumption for the primary impact estimate, DOE estimated the costs to be \$23 million/year and the benefits to be \$43 million/year with a net benefit of \$20 million/year at a 7% discount rate. The net benefit of the rule ranged from a low of \$9 million/year to \$53 million/year at a 7% discount rate as shown in the table below. The estimates using a 3% discount rate are also presented in the table below.

	Primary	Low Estimate	High Estimate	Year Dollars	Discount Rate	Period Covered
Annualized Monetized Costs (\$Millions/Year)	\$22,690,617	\$10,084,718	\$60,508,311	2010	7%	2013-2030
	\$23,674,479	\$10,521,991	\$63,131,945	2010	3%	2013-2030
Annualized Monetized Benefits (\$Millions/Year)	\$42,586,759	\$18,927,448	\$113,564,690	2010	7%	2013-2030
	\$42,927,555	\$19,078,913	\$114,473,479	2010	3%	2013-2030
Annualized Monetized Net Benefits (\$Millions/Year)	\$19,896,142	\$8,842,730	\$53,056,379	2010	7%	2013-2030
	\$19,253,076	\$8,556,922	\$51,341,534	2010	3%	2013-2030

Both NEI and DOE's analyses concur that MW's of nuclear generation serve as a rough approximation of potential market opportunity. In looking at comprehensive forecasts from today to 2030, DOE notes that at the maximum, the countries moving from generally authorized to specific authorization status represent significantly less than 1% of the total market.

B. Administrative Procedure Act

In accordance with 5 U.S.C. 553(b)(3)(B), the DOE finds that providing an opportunity for public comment on office name changes in DOE's internal organization structure prior to publication of this rule is not necessary and contrary to the public interest because they are minor technical

changes. Prior notice and opportunity to comment on these changes are unnecessary because they are not subject to the exercise of discretion by the DOE.

C. National Environmental Policy Act

DOE determined that today's final rule is covered under the Categorical Exclusion found in DOE's National Environmental Policy Act regulations at paragraph A5 of Appendix A to Subpart D, 10 CFR part 1021, categorical exclusion A5, which applies to a rule or regulation that interprets or amends an "existing rule or regulation that does not change the environmental effect of the rule or regulation being amended." Accordingly, neither an environmental assessment nor an environmental impact statement is required.

D. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires preparation of an initial regulatory flexibility analysis for any rule that by law must be proposed for public comment, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. As required by Executive Order 13272, "Proper Consideration of Small Entities in Agency Rulemaking," 67 FR 53461 (August 16, 2002), DOE published procedures and policies on February 19, 2003, to ensure that the potential impacts of its rules on small entities are properly considered during the rulemaking process (68 FR 7990). DOE has made its procedures and policies available on the Office of the General Counsel's website:

<http://www.energy.gov/gc/downloads/executive-order-13272-consideration-small-entities-agency-rulemaking>.

In the SNOPR, DOE certified that this rule would not have a significant economic impact on a substantial number of small entities and did not prepare a regulatory flexibility analysis for this rulemaking. The DOE received no comments on the certification, and has responded to comments related to the economic impacts of the rule elsewhere in this preamble; no changes to the certification

were made based on comments received. As a result, the DOE certifies that today's final rule will not have a significant impact on a substantial number of small entities. The DOE's certification and supporting statement of factual basis will be provided to the Chief Counsel for Advocacy of the Small Business Administration pursuant to 5 U.S.C. 605(b).

E. Paperwork Reduction Act

U.S. companies that wish to export nuclear technology or assistance within the scope of this final rule must provide DOE with information concerning the technology to be transferred as well as the destination and use or application of the assistance or technology. Depending on the destination and the technology in question, a U.S. company will be required to submit a report of the activity 30 days after the fact or a request for a specific authorization from the Secretary. DOE submitted a request for the reinstatement of the collection of information associated with recordkeeping and reporting requirements of part 810 to OMB for approval pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.) and the procedures implementing that Act, 5 CFR 1320.1 et seq. The collection of information requirements for compliance with part 810 and recordkeeping is subject to review and approval by OMB under OMB Control Number 1901-0263. OMB approved the reinstatement of the information collection on October 31, 2014. DOE published notices in the Federal Register on March 7, 2014, FRN# 2014-04984, p. 13048, and FRN# 2014-12800, p. 31928 soliciting comments on the DOE estimate of the information collection burden. No public comments were received on the 60-day or 30-day notices. In association with this rulemaking revision for part 810, DOE is submitting for OMB approval the revisions to this information collection.

Under the 1986 version of the rule, a list of countries at § 810.8(a) contained 73 countries that required case-by-case review for the Secretary to make a non-inimicality finding specifically authorizing the transfer of any technology or assistance except where generally authorized in § 810.7. By default, all countries not listed were generally authorized destinations for the transfer of nuclear

power plant technology and assistance to those countries without prior approval from DOE. In this final rule, DOE restructured the list to a positive list of destinations, including 51 destinations to which the transfer of nuclear power plant technology will be generally authorized. This revision has effected a net change of an additional 74 countries that were by default generally authorized for the transfer of nuclear power plant technology but will now require a specific authorization. While this is an increase in the number of destinations not eligible for a general authorization by default, in DOE's estimation, the positive generally authorized destination list is not expected to result in a substantial increase in the volume of reporting or requests for specific authorization, as the subject countries have no civilian nuclear programs or plans for civilian nuclear programs in the near future.

The reporting and application burden is estimated at three hours per response, and an average of three responses per distinct entity, regardless of it being a report of generally authorized activities or a request for specific authorization. This number includes the time for reviewing the regulation, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. DOE estimated for the 1986 version of the rule that the total number of unduplicated respondents to be 145 with the average of 2.22 responses per respondent, resulting in 322 responses and 966 total annual burden hours with the average burden per response at 3 hours and the average annual burden per respondent at 6.66 hours. Under the final rule, DOE is estimating that the number of respondents will remain the same but that the number of reports filed per respondent to increase from 2.22 to 3.19, resulting in 463 total annual responses and 1389 total annual burden hours. The average burden per response is estimated to remain at 3 hours per respondent and the average annual burden per respondent at 9.57 hours.

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the

requirements of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number.

F. Unfunded Mandates Reform Act of 1995

The Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4) generally requires Federal agencies to examine closely the impacts of regulatory actions on State, local, and tribal governments. Subsection 101(5) of title I of that law defines a Federal intergovernmental mandate to include any regulation that would impose upon State, local, or tribal governments an enforceable duty, except a condition of Federal assistance or a duty arising from participating in a voluntary federal program. Title II of that law requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and tribal governments, in the aggregate, or to the private sector, other than to the extent such actions merely incorporate requirements specifically set forth in a statute. Section 202 of that title requires a Federal agency to perform a detailed assessment of the anticipated costs and benefits of any rule that includes a Federal mandate which may result in costs to State, local, or tribal governments, or to the private sector, of \$100 million or more in any one year (adjusted annually for inflation). 2 U.S.C. 1532 (a) and (b). Section 204 of that title requires each agency that proposes a rule containing a significant Federal intergovernmental mandate to develop an effective process for obtaining meaningful and timely input from elected officers of State, local, and tribal governments (2 U.S.C. 1534).

This rule does not impose a Federal mandate on State, local, or tribal governments or on the private sector. Accordingly, no assessment or analysis is required under the Unfunded Mandates Reform Act of 1995.

G. Treasury and General Government Appropriations Act, 1999

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Pub. L. 105-277) requires Federal agencies to issue a Family Policymaking Assessment for any proposed rule that may affect family well-being. The final rule will not have any impact on the autonomy or integrity of

the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

H. Executive Order 13132

Executive Order 13132, “Federalism,” 64 FR 43255 (August 4, 1999), imposes certain requirements on agencies formulating and implementing policies or regulations that preempt State law or that have federalism implications. Agencies are required to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and carefully assess the necessity for such actions. DOE has examined this rule and has determined that it does not pre-empt State law and will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. No further action is required by Executive Order 13132.

I. Executive Order 12988

With respect to the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, “Civil Justice Reform,” 61 FR 4729 (February 7, 1996), imposes on Executive agencies the general duty to adhere to the following requirements: (1) eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; and (3) provide a clear legal standard for affected conduct rather than a general standard and promote simplification and burden reduction. With regard to the review required by section 3(a), section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) clearly specifies the preemptive effect, if any; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires

Executive agencies to review regulations in light of applicable standards in section 3(a) and section 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, the rule meets the relevant standards of Executive Order 12988.

J. Treasury and General Government Appropriations Act, 2001

The Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note), provides for agencies to review most disseminations of information to the public under guidelines established by each agency pursuant to general guidelines issued by OMB.

OMB's guidelines were published at 67 FR 8452 (February 22, 2002), and DOE's guidelines were published at 67 FR 62446 (October 7, 2002). DOE has reviewed this rule under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

K. Executive Order 13211

Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use," 66 FR 28355 (May 22, 2001), requires Federal agencies to prepare and submit to OMB a Statement of Energy Effects for any proposed significant energy action. A "significant energy action" is defined as any action by an agency that promulgated or is expected to lead to promulgation of a final rule, and that: (1) is a significant regulatory action under Executive Order 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy, or (3) is designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action. For any proposed significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use should the proposal be implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use. Today's regulatory action will not have a significant

adverse effect on the supply, distribution, or use of energy and is therefore not a significant energy action. Accordingly, DOE has not prepared a Statement of Energy Effects.

L. Executive Order 13609

Executive Order 13609 of May 1, 2012, “Promoting International Regulatory Cooperation,” requires that, to the extent permitted by law and consistent with the principles and requirements of Executive Order 13563 and Executive Order 12866, each Federal agency shall:

- (a) If required to submit a Regulatory Plan pursuant to Executive Order 12866, include in that plan a summary of its international regulatory cooperation activities that are reasonably anticipated to lead to significant regulations, with an explanation of how these activities advance the purposes of Executive Order 13563 and this order;
- (b) Ensure that significant regulations that the agency identifies as having significant international impacts are designated as such in the Unified Agenda of Federal Regulatory and Deregulatory Actions, on RegInfo.gov, and on Regulations.gov;
- (c) In selecting which regulations to include in its retrospective review plan, as required by Executive Order 13563, consider:
 - (i) Reforms to existing significant regulations that address unnecessary differences in regulatory requirements between the United States and its major trading partners, consistent with section 1 of this order, when stakeholders provide adequate information to the agency establishing that the differences are unnecessary; and
 - (ii) Such reforms in other circumstances as the agency deems appropriate; and
- (d) For significant regulations that the agency identifies as having significant international impacts, consider, to the extent feasible, appropriate, and consistent with law, any regulatory approaches by a foreign government that the United States has agreed to consider under a regulatory cooperation council work plan.

DOE has reviewed this rule under the provisions of Executive Order 13609 and determined that the rule complies with all requirements set forth in the order.

M. Congressional Notification

As required by 5 U.S.C. 801, DOE will submit to Congress a report regarding the issuance of today's final rule prior to the effective date set forth at the outset of this notice. The report will state that it has been determined that the rule is not a "major rule" as defined by 5 U.S.C. 801(2).

VI. Approval by the Office of the Secretary

The Office of the Secretary of Energy has approved the publication of this final rule.

List of Subjects in 10 CFR Part 810

Foreign relations, Nuclear energy, Reporting and recordkeeping requirements.

Issued in Washington, DC, on February 7, 2015.

Ernest J. Moniz,
Secretary of Energy

For the reasons stated in the preamble, DOE amends title 10 of the Code of Federal Regulations by revising part 810 to read as follows:

PART 810--ASSISTANCE TO FOREIGN ATOMIC ENERGY ACTIVITIES

Sec.

- 810.1 Purpose.
- 810.2 Scope.
- 810.3 Definitions.
- 810.4 Communications.
- 810.5 Interpretations.
- 810.6 Generally authorized activities.
- 810.7 Activities requiring specific authorization.
- 810.8 Restrictions on general and specific authorization.
- 810.9 Grant of specific authorization.
- 810.10 Revocation, suspension, or modification of authorization.
- 810.11 Information required in an application for specific authorization.
- 810.12 Reports.
- 810.13 Additional information.
- 810.14 Special provision regarding Ukraine.
- 810.15 Violations.
- 810.16 Effective date and savings clause.

Appendix A to Part 810 -- Generally Authorized Destinations

Authority: Secs. 57, 127, 128, 129, 161, 222, and 232 Atomic Energy Act of 1954, as amended by the Nuclear Nonproliferation Act of 1978, Pub. L. 95-242, 68 Stat. 932, 948, 950, 958, 92 Stat. 126, 136, 137, 138 (42 U.S.C. 2077, 2156, 2157, 2158, 2201, 2272, 2280), and the Intelligence Reform and Terrorism Prevention Act of 2004, Pub. L. 108-458, 118 Stat. 3768; Sec. 104 of the Energy Reorganization Act of 1974, Pub. L. 93-438; Sec. 301, Department of Energy Organization Act, Pub. L. 95-91; National Nuclear Security Administration Act, Pub. L. 106-65, 50 U.S.C. 2401 *et seq.*, as amended.

§ 810.1 Purpose.

The regulations in this part implement section 57 b.(2) of the Atomic Energy Act, which empowers the Secretary, with the concurrence of the Department of State, and after consultation with the Nuclear Regulatory Commission, the Department of Commerce, and the Department of Defense, to

authorize persons to directly or indirectly engage or participate in the development or production of special nuclear material outside the United States. The purpose of the regulations in this part is to:

- (a) Identify activities that are generally authorized by the Secretary and thus require no other authorization under this part;
- (b) Identify activities that require specific authorization by the Secretary and explain how to request authorization; and
- (c) Specify reporting requirements for authorized activities.

§ 810.2 Scope.

(a) Part 810 (this part) applies to:

- (1) All persons subject to the jurisdiction of the United States who directly or indirectly engage or participate in the development or production of any special nuclear material outside the United States; and
- (2) The transfer of technology that involves any of the activities listed in paragraph (b) of this section either in the United States or abroad by such persons or by licensees, contractors or subsidiaries under their direction, supervision, responsibility, or control.

(b) The activities referred to in paragraph (a) of this section are:

- (1) Chemical conversion and purification of uranium and thorium from milling plant concentrates and in all subsequent steps in the nuclear fuel cycle;
- (2) Chemical conversion and purification of plutonium and neptunium;
- (3) Nuclear fuel fabrication, including preparation of fuel elements, fuel assemblies and cladding thereof;

- (4) Uranium isotope separation (uranium enrichment), plutonium isotope separation, and isotope separation of any other elements (including stable isotope separation) when the technology or process can be applied directly or indirectly to uranium or plutonium;
- (5) Nuclear reactor development, production or use of the components within or attached directly to the reactor vessel, the equipment that controls the level of power in the core, and the equipment or components that normally contain or come in direct contact with or control the primary coolant of the reactor core;
- (6) Development, production or use of production accelerator-driven subcritical assembly systems;
- (7) Heavy water production and hydrogen isotope separation when the technology or process has reasonable potential for large-scale separation of deuterium (^2H) from protium (^1H);
- (8) Reprocessing of irradiated nuclear fuel or targets containing special nuclear material, and post-irradiation examination of fuel elements, fuel assemblies and cladding thereof, if it is part of a reprocessing program; and
- (9) The transfer of technology for the development, production, or use of equipment or material especially designed or prepared for any of the above listed activities. (*See Nuclear Regulatory Commission regulations at 10 CFR part 110, Appendices A through K, and O, for an illustrative list of items considered to be especially designed or prepared for certain listed nuclear activities.*)

(c) This part does not apply to:

- (1) Exports authorized by the Nuclear Regulatory Commission, Department of State, or Department of Commerce;

- (2) Transfer of publicly available information, publicly available technology, or the results of fundamental research;
 - (3) Uranium and thorium mining and milling (*e.g.*, production of impure source material concentrates such as uranium yellowcake and all activities prior to that production step);
 - (4) Nuclear fusion reactors per se, except for supporting systems involving hydrogen isotope separation technologies within the scope defined in paragraph (b)(7) of this section and § 810.7(c)(3);
 - (5) Production or extraction of radiopharmaceutical isotopes when the process does not involve special nuclear material; and
 - (6) Transfer of technology to any individual who is lawfully admitted for permanent residence in the United States or is a protected individual under the Immigration and Naturalization Act (8 U.S.C. 1324b(a)(3)).
- (d) Persons under U.S. jurisdiction are responsible for their foreign licensees, contractors, or subsidiaries to the extent that the former have control over the activities of the latter.

§ 810.3 Definitions.

As used in this part 810:

Agreement for cooperation means an agreement with another nation or group of nations concluded under sections 123 or 124 of the Atomic Energy Act.

Assistance means assistance in such forms as instruction, skills, training, working knowledge, consulting services, or any other assistance as determined by the Secretary. Assistance may involve the transfer of technical data.

Atomic Energy Act means the Atomic Energy Act of 1954, as amended.

Classified information means national security information classified under Executive Order 13526 or any predecessor or superseding order, and Restricted Data classified under the Atomic Energy Act.

Cooperative enrichment enterprise means a multi-country or multi-company (where at least two of the companies are incorporated in different countries) joint development or production effort. The term includes a consortium of countries or companies or a multinational corporation.

Country, as well as government, nation, state, and similar entity, shall be read to include Taiwan, consistent with section 4 of the Taiwan Relations Act (22 U.S.C. 3303).

Development means any activity related to all phases before production such as: design, design research, design analysis, design concepts, assembly and testing of prototypes, pilot production schemes, design data, process of transforming design data into a product, configuration design, integration design, and layouts.

DOE means the U.S. Department of Energy.

Enrichment means isotope separation of uranium or isotope separation of plutonium, regardless of the type of process or separation mechanism used.

Fissile material means isotopes that readily fission after absorbing a neutron of any energy, either fast or slow. Fissile materials are uranium-235, uranium-233, plutonium-239, and plutonium-241.

Foreign national means an individual who is not a citizen or national of the United States, but excludes U.S. lawful permanent residents and protected individuals under the Immigration and Naturalization Act (8 U.S.C. 1324b(a)(3)).

Fundamental research means basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community, as distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary or national security reasons.

General authorization means an authorization granted by the Secretary under section 57 b.(2) of the Atomic Energy Act to provide assistance or technology to foreign atomic energy activities subject to this part and which does not require a request for, or the Secretary's issuance of, a specific authorization.

IAEA means the International Atomic Energy Agency.

NNPA means the Nuclear Non-Proliferation Act of 1978, 22 U.S.C. 3201 *et seq.*

NPT means the Treaty on the Non-Proliferation of Nuclear Weapons, done on July 1, 1968.

Nuclear reactor means an apparatus, other than a nuclear explosive device, designed or used to sustain nuclear fission in a self-sustaining chain reaction.

Operational safety means the capability of a reactor to be operated in a manner that complies with national standards or requirements or widely-accepted international standards and recommendations to prevent uncontrolled or inadvertent criticality, prevent or mitigate uncontrolled release of radioactivity to the environment, monitor and limit staff exposure to radiation and radioactivity, and protect off-site population from exposure to radiation or radioactivity. Operational safety may be enhanced by providing expert advice, equipment, instrumentation, technology, software, services, analyses, procedures, training, or other assistance that improves the capability of the reactor to be operated in compliance with such standards, requirements or recommendations.

Person means:

- (1) Any individual, corporation, partnership, firm, association, trust, estate, public or private institution;
- (2) Any group, government agency other than DOE, or any State or political entity within a State; and
- (3) Any legal successor, representative, agent, or agency of the foregoing.

Production means all production phases such as: construction, production engineering, manufacture, integration, assembly or mounting, inspection, testing, and quality assurance.

Production accelerator means a particle accelerator especially designed, used, or intended for use with a production subcritical assembly.

Production accelerator-driven subcritical assembly system means a system comprised of a production subcritical assembly and a production accelerator and which is especially designed, used, or intended for the production of plutonium or uranium-233. In such a system, the production accelerator target provides a source of neutrons used to effect special nuclear material production in the production subcritical assembly.

Production reactor means a nuclear reactor especially designed or used primarily for the production of plutonium or uranium-233.

Production subcritical assembly means an apparatus that contains source material or special nuclear material to produce a nuclear fission chain reaction that is not self-sustaining and that is especially designed, used, or intended for the production of plutonium or uranium-233.

Publicly available information means information in any form that is generally accessible, without restriction, to the public.

Publicly available technology means technology that is already published or has been prepared for publication; arises during, or results from, fundamental research; or is included in an application filed with the U.S. Patent Office and eligible for foreign filing under 35 U.S.C. 184.

Restricted Data means all data concerning:

- (1) Design, manufacture, or utilization of atomic weapons;
- (2) The production of special nuclear material; or

- (3) The use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to section 142 of the Atomic Energy Act.

Secretary means the Secretary of Energy.

Sensitive nuclear technology means any information (including information incorporated in a production or utilization facility or important component part thereof) which is not available to the public (see definition of "publicly available information") and which is important to the design, construction, fabrication, operation, or maintenance of a uranium enrichment or nuclear fuel reprocessing facility or a facility for the production of heavy water, but shall not include Restricted Data controlled pursuant to chapter 12 of the Atomic Energy Act. The information may take a tangible form such as a model, prototype, blueprint, or operation manual or an intangible form such as assistance.

Source material means:

- (1) Uranium or thorium, other than special nuclear material; or
- (2) Ores that contain by weight 0.05 percent or more of uranium or thorium, or any combination of these materials.

Special nuclear material means:

- (1) Plutonium,
- (2) Uranium-233, or
- (3) Uranium enriched above 0.711 percent by weight in the isotope uranium-235.

Specific authorization means an authorization granted by the Secretary under section 57 b.(2) of the Atomic Energy Act, in response to an application filed under this part, to engage in specifically authorized nuclear activities subject to this part.

Technical data means data in such forms as blueprints, plans, diagrams, models, formulae, engineering designs, specifications, manuals, and instructions written or recorded on other media or devices such as disks, tapes, read-only memories, and computational methodologies, algorithms, and computer codes that can directly or indirectly affect the production of special nuclear material.

Technology means assistance or technical data required for the development, production or use of any plant, facility, or especially designed or prepared equipment for the activities described in § 810.2(b).

Use means operation, installation (including on-site installation), maintenance (checking), repair, overhaul, or refurbishing.

United States, when used in a geographical sense, includes Puerto Rico and all territories and possessions of the United States.

§ 810.4 Communications.

- (a) All communications concerning the regulations in this part should be addressed to: U.S. Department of Energy, Washington, DC 20585. Attention: Senior Policy Advisor, National Nuclear Security Administration/Office of Nonproliferation and Arms Control (NPAC), Telephone (202) 586-1007.
- (b) Communications also may be delivered to DOE's headquarters at 1000 Independence Avenue, SW, Washington, DC 20585. All clearly marked proprietary information will be given the maximum protection allowed by law.
- (c) Communications may also be delivered by e-mail to: Part810@nnsa.doe.gov . For "fast track" activities described in §§ 810.6(c)(1) and (c)(2) e-mails should be sent to: Part810-OperationalSafety@nnsa.doe.gov . Notifications regarding activity in the Ukraine should be delivered by e-mail to: Part810-Ukraine@nnsa.doe.gov .

§ 810.5 Interpretations.

- (a) The advice of the DOE Office of Nonproliferation and Arms Control may be requested on whether a proposed activity falls outside the scope of this part, is generally authorized under § 810.6, or requires a specific authorization under § 810.7. However, unless authorized by the Secretary in writing, no interpretation of the regulations in this part other than a written interpretation by the DOE General Counsel is binding upon DOE.
- (b) When advice is requested from the DOE Office of Nonproliferation and Arms Control, or a binding, written determination is requested from the DOE General Counsel, a response normally will be made within 30 calendar days and, if this is not feasible, an interim response will explain the reason for the delay.
- (c) The DOE Office of Nonproliferation and Arms Control may periodically publish abstracts of general or specific authorizations that may be of general interest, exclusive of proprietary business-confidential data submitted to DOE or other information protected by law from unauthorized disclosure.

§ 810.6 Generally authorized activities.

The Secretary has determined that the following activities are generally authorized, provided that no sensitive nuclear technology or assistance described in § 810.7 is involved:

- (a) Engaging directly or indirectly in the production of special nuclear material at facilities in countries or with entities listed in the Appendix to this part;
- (b) Transfer of technology to a citizen or national of a country other than the United States not listed in the Appendix to this part-and working at an NRC-licensed facility, provided:
 - (1) The foreign national is lawfully employed by or contracted to work for a U.S. employer in the United States;

- (2) The foreign national executes a confidentiality agreement with the U.S. employer to safeguard the technology from unauthorized use or disclosure;
 - (3) The foreign national has been granted unescorted access in accordance with NRC regulations at an NRC-licensed facility; and
 - (4) The foreign national's U.S. employer authorizing access to the technology complies with the reporting requirements in § 810.12(g).
- (c) Activities at any safeguarded or NRC-licensed facility to:
- (1) Prevent or correct a current or imminent radiological emergency posing a significant danger to the health and safety of the off-site population, which emergency in DOE's assessment cannot be met by other means, provided DOE is notified in writing in advance and does not object within 48 hours of receipt of the advance notification;
 - (2) Furnish operational safety information or assistance to existing safeguarded civilian nuclear reactors outside the United States in countries with safeguards agreements with the IAEA or an equivalent voluntary offer, provided DOE is notified in writing and approves the activity in writing within 45 calendar days of the notice. The applicant should provide all the information required under § 810.11 and specific references to the national or international safety standards or requirements for operational safety for nuclear reactors that will be addressed by the assistance; or
 - (3) Furnish operational safety information or assistance to existing, proposed, or new-build civilian nuclear facilities in the United States, provided DOE is notified by certified mail return receipt requested and approves the activity in writing within 45 calendar days of the notice. The applicant should provide all the information required under § 810.11.

- (d) Participation in exchange programs approved by the Department of State in consultation with DOE;
- (e) Activities carried out in the course of implementation of the “Agreement between the United States of America and the IAEA for the Application of Safeguards in the United States,” done on December 9, 1980;
- (f) Activities carried out by persons who are full-time employees of the IAEA or whose employment by or work for the IAEA is sponsored or approved by the Department of State or DOE; or
- (g) Extraction of Molybdenum-99 for medical use from irradiated targets of enriched uranium, provided that the activity does not also involve purification and recovery of enriched uranium materials, and provided further, that the technology used does not involve significant components relevant for reprocessing spent nuclear reactor fuel (e.g., high-speed centrifugal contactors, pulsed columns).

§ 810.7 Activities requiring specific authorization.

Any person requires a specific authorization by the Secretary before:

- (a) Engaging in any of the activities listed in § 810.2(b) with any foreign country or entity not specified in the Appendix to this part;
- (b) Providing or transferring sensitive nuclear technology to any foreign country or entity; or
- (c) Engaging in or providing technology (including assistance) for any of the following activities with respect to any foreign country or entity (or a citizen or national of that country other than U.S. lawful permanent residents or protected individuals under the Immigration and Naturalization Act (8 U.S.C. 1324b(a)(3)):

- (1) Uranium isotope separation (uranium enrichment), plutonium isotope separation, or isotope separation of any other elements (including stable isotope separation) when the technology or process can be applied directly or indirectly to uranium or plutonium;
- (2) Fabrication of nuclear fuel containing plutonium, including preparation of fuel elements, fuel assemblies, and cladding thereof;
- (3) Heavy water production, and hydrogen isotope separation, when the technology or process has reasonable potential for large-scale separation of deuterium (^2H) from protium (^1H);
- (4) Development, production or use of a production accelerator-driven subcritical assembly system;
- (5) Development, production or use of a production reactor; or
- (6) Reprocessing of irradiated nuclear fuel or targets containing special nuclear material.

§ 810.8 Restrictions on general and specific authorization.

A general or specific authorization granted by the Secretary under this part:

- (a) Is limited to activities involving only unclassified information and does not permit furnishing classified information;
- (b) Does not relieve a person from complying with the relevant laws or the regulations of other U.S. Government agencies applicable to exports; and
- (c) Does not authorize a person to engage in any activity when the person knows or has reason to know that the activity is intended to provide assistance in designing, developing, fabricating, or testing a nuclear explosive device.

§ 810.9 Grant of specific authorization.

- (a) An application for authorization to engage in activities for which specific authorization is required under § 810.7 should be made to the U.S. Department of Energy, National Nuclear

Security Administration, Washington, DC 20585, Attention: Senior Policy Advisor, Office of Nonproliferation and Arms Control (NPAC).

(b) The Secretary will approve an application for specific authorization if it is determined, with the concurrence of the Department of State and after consultation with the Nuclear Regulatory Commission, Department of Commerce, and Department of Defense, that the activity will not be inimical to the interest of the United States. In making such a determination, the Secretary will take into account the following factors:

- (1) Whether the United States has an agreement for cooperation in force covering exports to the country or entity involved;
- (2) Whether the country is a party to, or has otherwise adhered to, the NPT;
- (3) Whether the country is in good standing with its acknowledged nonproliferation commitments;
- (4) Whether the country is in full compliance with its obligations under the NPT;
- (5) Whether the country has accepted IAEA safeguards obligations on all nuclear materials used for peaceful purposes and has them in force;
- (6) Whether other nonproliferation controls or conditions exist on the proposed activity, including that the recipient is duly authorized by the country to receive and use the technology sought to be transferred;
- (7) Significance of the assistance or transferred technology relative to the existing nuclear capabilities of the country;
- (8) Whether the transferred technology is part of an existing cooperative enrichment enterprise or the supply chain of such an enterprise;
- (9) The availability of comparable assistance or technology from other sources; and

- (10) Any other factors that may bear upon the political, economic, competitiveness, or security interests of the United States, including the obligations of the United States under treaties or other international agreements, and the obligations of the country under treaties or other international agreements.
- (c) If the proposed activity involves the export of sensitive nuclear technology, the requirements of sections 127 and 128 of the Atomic Energy Act and of any applicable United States international commitments must also be met. For the export of sensitive nuclear technology, in addition to the factors in paragraph (b) of this section, the Secretary will take into account:
- (1) Whether the country has signed, ratified, and is implementing a comprehensive safeguards agreement with the IAEA and has in force an Additional Protocol based on the Model Additional Protocol, or, pending this, in the case of a regional accounting and control arrangement for nuclear materials, is implementing, in cooperation with the IAEA, a safeguards agreement approved by the IAEA Board of Governors prior to the publication of INFCIRC/540 (September 1997); or alternatively whether comprehensive safeguards, including the measures of the Model Additional Protocol, are being applied in the country;
- (2) Whether the country has not been identified in a report by the IAEA Secretariat that is under consideration by the IAEA Board of Governors, as being in breach of obligations to comply with the applicable safeguards agreement, nor continues to be the subject of Board of Governors decisions calling upon it to take additional steps to comply with its safeguards obligations or to build confidence in the peaceful nature of its nuclear program, nor as to which the IAEA Secretariat has reported that it is unable to implement the applicable safeguards agreement. This criterion would not apply in cases where the IAEA Board of Governors or the United Nations Security Council subsequently decides that adequate assurances exist as to the

peaceful purposes of the country's nuclear program and its compliance with the applicable safeguards agreements. For the purposes of this paragraph, "breach" refers only to serious breaches of proliferation concern;

- (3) Whether the country is adhering to the Nuclear Suppliers Group Guidelines and, where applicable, has reported to the Security Council of the United Nations that it is implementing effective export controls as identified by Security Council Resolution 1540; and
 - (4) Whether the country adheres to international safety conventions relating to nuclear or other radioactive materials or facilities.
- (d) Unless otherwise prohibited by U.S. law, the Secretary may grant an application for specific authorization for activities related to the enrichment of source material and special nuclear material, provided that:
- (1) The U.S. Government has received written nonproliferation assurances from the government of the country;
 - (2) That it/they accept(s) the sensitive enrichment equipment and enabling technologies or an operable enrichment facility under conditions that do not permit or enable unauthorized replication of the facilities;
 - (3) That the subject enrichment activity will not result in the production of uranium enriched to greater than 20% in the isotope uranium-235; and
 - (4) That there are in place appropriate security arrangements to protect the activity from use or transfer inconsistent with the country's national laws.
- (e) Approximately 30 calendar days after the Secretary's grant of a specific authorization, a copy of the Secretary's determination may be provided to any person requesting it at DOE's Public Reading Room, unless the applicant submits information demonstrating that public disclosure will cause

substantial harm to its competitive position. This provision does not affect any other authority provided by law for the non-disclosure of information.

§ 810.10 Revocation, suspension, or modification of authorization.

The Secretary may revoke, suspend, or modify a general or specific authorization:

- (a) For any material false statement in an application for specific authorization or in any additional information submitted in its support;
- (b) For failing to provide a report or for any material false statement in a report submitted pursuant to § 810.12;
- (c) If any authorization governed by this part is subsequently determined by the Secretary to be inimical to the interest of the United States or otherwise no longer meets the legal criteria for approval; or
- (d) Pursuant to section 129 of the Atomic Energy Act.

§ 810.11 Information required in an application for specific authorization.

- (a) An application letter must include the following information:
 - (1) The name, address, and citizenship of the applicant, and complete disclosure of all real parties in interest; if the applicant is a corporation or other legal entity, where it is incorporated or organized; the location of its principal office; and the degree of any control or ownership by any foreign individual, corporation, partnership, firm, association, trust, estate, public or private institution or government agency;
 - (2) The country or entity to receive the assistance or technology; the name and location of any facility or project involved; and the name and address of the person for which or whom the activity is to be performed;

- (3) A description of the assistance or technology to be provided, including a complete description of the proposed activity, its approximate monetary value, and a detailed description of any specific project to which the activity relates as specified in §§ 810.9(b)(7), (8), and (9); and
 - (4) The designation of any information that if publicly disclosed would cause substantial harm to the competitive position of the applicant.
- (b) Except as provided in § 810.6(b), an applicant seeking to employ a citizen or national of a country not listed in the Appendix in a position that could result in the transfer of technology subject to § 810.2, or seeking to employ any foreign national in the United States or in a foreign country that could result in the export of assistance or transfer of technology subject to § 810.7 must request a specific authorization. The applicant must provide, with respect to each foreign national to whom access to technology will be granted, the following:
- (1) A description of the technology that would be made available to the foreign national;
 - (2) The purpose of the proposed transfer, a description of the applicant's technology control program, and any Nuclear Regulatory Commission standards applicable to the employer's grant of access to the technology;
 - (3) A copy of any confidentiality agreement to safeguard the technology from unauthorized use or disclosure between the applicant and the foreign national;
 - (4) Background information about the foreign national, including the individual's citizenship, all countries where the individual has resided for more than six months, the training or educational background of the individual, all work experience, any other known affiliations with persons engaged in activities subject to this part, and any current immigration or visa status in the United States; and

- (5) A statement signed by the foreign national that he/she will comply with the regulations under this part; will not disclose the applicant's technology without DOE's prior written authorization; and will not, at any time during or after his/her employment with the applicant, use the applicant's technology for any nuclear explosive device, for research on or development of any nuclear explosive device, or in furtherance of any military purpose.
- (c) An applicant for a specific authorization related to the enrichment of fissile material must submit information that demonstrates that the proposed transfer will avoid, so far as practicable, the transfer of enabling design or manufacturing technology associated with such items; and that the applicant will share with the recipient only information required for the regulatory purposes of the recipient country or to ensure the safe installation and operation of a resulting enrichment facility, without divulging enabling technology.

§ 810.12 Reports.

- (a) Each person who has received a specific authorization shall, within 30 calendar days after beginning the authorized activity, provide to DOE a written report containing the following information:
- (1) The name, address, and citizenship of the person submitting the report;
 - (2) The name, address, and citizenship of the person for whom or which the activity is being performed;
 - (3) A description of the activity, the date it began, its location, status, and anticipated date of completion; and
 - (4) A copy of the DOE letter authorizing the activity.
- (b) Each person carrying out a specifically authorized activity shall inform DOE, in writing within 30 calendar days, of completion of the activity or of its termination before completion.

- (c) Each person granted a specific authorization shall inform DOE, in writing within 30 calendar days, when it is known that the proposed activity will not be undertaken and the granted authorization will not be used.
- (d) DOE may require reports to include such additional information that may be required by applicable U.S. law, regulation, or policy with respect to the specific nuclear activity or country for which specific authorization is required.
- (e) Each person, within 30 calendar days after beginning any generally authorized activity under § 810.6, shall provide to DOE:
- (1) The name, address, and citizenship of the person submitting the report;
 - (2) The name, address, and citizenship of the person for whom or which the activity is being performed;
 - (3) A description of the activity, the date it began, its location, status, and anticipated date of completion; and
 - (4) A written assurance that the applicant has an agreement with the recipient ensuring that any subsequent transfer of materials, equipment, or technology transferred under general authorization under circumstances in which the conditions in § 810.6 would not be met will take place only if the applicant obtains DOE's prior written approval.
- (f) Individuals engaging in generally authorized activities as employees of persons required to report are not themselves required to submit the reports described in paragraph (e) of this section.
- (g) Persons engaging in generally authorized activities under § 810.6(b) are required to notify DOE that a citizen or national of a country not listed in the Appendix to this part has been granted access to information subject to § 810.2 in accordance with Nuclear Regulatory Commission access requirements. The report should contain the information required in § 810.11(b).

- (h) All reports should be sent to: U.S. Department of Energy, National Nuclear Security Administration, Washington, DC 20585, Attention: Senior Policy Advisor, Office of Nonproliferation and Arms Control (NPAC).

§ 810.13 Additional information.

DOE may at any time require a person engaging in any generally or specifically authorized activity to submit additional information.

§ 810.14 Special provisions regarding Ukraine.

- (a) *Pre-activity notification requirements.* Any person beginning any generally authorized activity involving Ukraine shall provide to DOE at least ten days prior to beginning that activity a report containing the following information:
- (1) The name, address, and citizenship of the person submitting the notification;
 - (2) The name, address, and citizenship of the person for which the activity is to be performed;
 - (3) A description of the activity, the date it is proposed to begin, its location, status, and anticipated date of completion; and
 - (4) A written assurance that the person that is to perform the activity has an agreement with the recipient that any subsequent transfer of technology or information transferred under general authorization will not be transferred to a country that is not listed in the Appendix to this part without the prior written approval of DOE.
- (b) *Post-activity reporting requirements.* Every person completing a generally authorized activity in Ukraine shall provide to DOE within ten days following the original transfer of technology or information written confirmation that such transfer was completed in accordance with the description of the activity provided as required by paragraph (a) of this section.

§ 810.15 Violations.

(a) The Atomic Energy Act provides that:

- (1) In accordance with section 232 of the AEA, permanent or temporary injunctions, restraining or other orders may be granted to prevent a violation of any provision of the Atomic Energy Act or any regulation or order issued thereunder.
- (2) In accordance with section 222 of the AEA, whoever willfully violates, attempts to violate, or conspires to violate any provision of section 57 of the Atomic Energy Act may be fined up to \$10,000 or imprisoned up to 10 years, or both. If the offense is committed with intent to injure the United States or to aid any foreign nation, the penalty could be up to life imprisonment or a \$20,000 fine, or both.

(b) In accordance with Title 18 of the United States Code, section 1001, whoever knowingly and willfully falsifies, conceals, or covers up a material fact or makes or uses false, fictitious or fraudulent statements or representations shall be fined under that title or imprisoned up to five or eight years depending on the crime, or both.

§ 810.16 Effective date and savings clause.

(a) The regulations in this part are effective **[INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]**.

(b) Except for actions that may be taken by DOE pursuant to § 810.10, the regulations in this part do not affect the validity or terms of any specific authorizations granted under regulations in effect before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATON IN THE FEDERAL; REGISTER]** or generally authorized activities under those regulations for which the contracts, purchase orders, or licensing arrangements were already in effect. Persons engaging in activities that were generally authorized under regulations in effect before **[INSERT DATE 30 DAYS AFTER**

DATE OF PUBLICATON IN THE FEDERAL REGISTER], but that require specific authorization under the regulations in this part, must request specific authorization by **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATON IN THE FEDERAL REGISTER]** and may continue their activities until DOE acts on the request.

APPENDIX A TO PART 810 -- Generally Authorized Destinations

Argentina	Korea, Republic of
Australia	Latvia
Austria	Lithuania
Belgium	Luxembourg
Brazil	Malta
Bulgaria	Mexico (For all activities related to INFCIRC/203 Parts 1 and 2 and INFCIRC/825 only)
Canada	Morocco
Chile (For all activities related to INFCIRC/834 only)	Netherlands
Colombia	Norway
Croatia	Poland
Cyprus	Portugal
Czech Republic	Romania
Denmark	Slovakia
Egypt	Slovenia
Estonia	South Africa
Finland	Spain
France	Sweden
Germany	Switzerland
Greece	Taiwan
Hungary	Turkey
Indonesia	Ukraine (Refer to § 810.14 for specific information and requirements)
International Atomic Energy Agency	United Arab Emirates
Ireland	United Kingdom
Italy	Vietnam
Japan	
Kazakhstan	

[FR Doc. 2015-03479 Filed 02/20/2015 at 8:45 am; Publication Date: 02/23/2015]